THE AMERICAN REVIEW OF REVIEWS

EDITED BY ALBERT SHAW

CONTENTS FOR MARCH, 1919

TERMS:—Issued monthly, 35 cents a number, $4.00 a year in advance in the United States, Porto Rico, Hawaii, Cuba, Canada, Mexico, and the Philippines. Elsewhere $5.00. Entered at New York Post Office as second-class matter. Entered as second-class matter at the Post-office Department, Ottawa, Canada. Subscribers may remit to us by post-office or express money orders, or by bank checks, drafts, or registered letters. Money in letters is sent at sender's risk. Renew as early as possible in order to avoid a break in the receipt of the numbers. Bookdealers, Postmasters and Newsdealers receive subscriptions.

THE REVIEW OF REVIEWS CO., 30 Irving Place, New York

ALBERT SHAW, Pres. CHAS. D. LANIER, Sec. and Treas.

AN ITALIAN TRIBUTE TO WOODROW WILSON—VAST THRONGS IN MILAN GATHER TO WELCOME THE DISTINGUISHED VISITOR

THE AMERICAN
REVIEW OF REVIEWS

VOL. LIX. NEW YORK, MARCH, 1919 No. 3

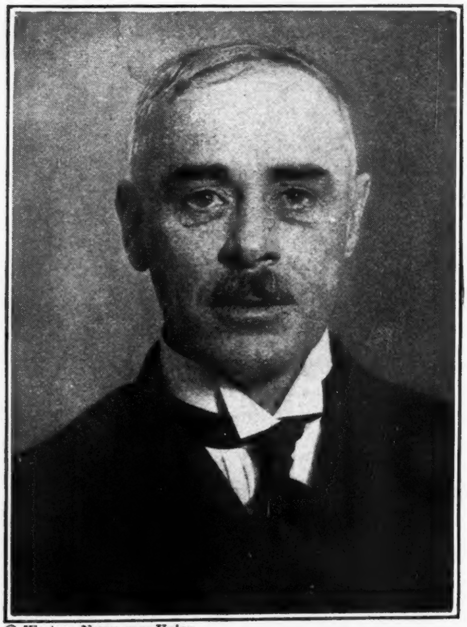
THE PROGRESS OF THE WORLD

Beginnings at Paris The cabled survey sent to our readers by Mr. Simonds from Paris, as the League of Nations had been drafted and as President Wilson was sailing for America, reflects something of the anxiety that had followed elation when the difficulties that were to be faced by the Peace Conference had begun to assume concrete shape. It is hard to form just estimates in the midst of current affairs of such bewildering variety and magnitude. The preamble and twenty-six articles of the Covenant of the League of Nations were read and interpreted by President Wilson on Friday, February 14, in a full session of the Conference. Final adoption will come at a later period. According to one's hopes, one's fears, or one's point of view, the project as drafted is either gratifying or disappointing. In our opinion, it is a commendable beginning and is fraught with high promise. From the practical standpoint of European peace, however, the altered armistice conditions under the leadership of Foch have more immediate significance than the League of Nations.

Our Wars, and the Aftermath We shall soon have completed four months since the armistice was signed on the 11th of November. The joy and enthusiasm of those November days were beyond any previous American experience with the possible exception of the rejoicing early in April, 1865, when the Civil War ended with the scene at Appomattox. There was a difficult and trying period of reconstruction that followed the surrender of Lee and the death of Lincoln; and some of the political and social problems born in that time of turmoil have not yet been fully solved after half a century. This country was deeply thankful, and also glad and buoyant, with the news of the ending of the war with Spain a little more than twenty years ago. But that episode had consequences quite unforeseen; so that the course of our national history in its larger aspects for about sixteen years—a period with which the career of Theodore Roosevelt was especially identified—grew directly out of the war with Spain.

Result of the War With Spain As a result of this war we annexed Porto Rico and Hawaii; established the Republic of Cuba; assumed leadership in the Caribbean Sea; constructed the Panama Canal and created the Republic of Panama; acquired from Spain the control of the Philippine Islands; led in the so-called "open door" policy in China; became influential in the Pacific; attempted to bring about a reorganization of Central America; and passed from our comparative isolation of the Nineteenth Century to that larger place in world affairs that we were destined to occupy in the Twentieth. It was in the thick of that general situation of twenty years ago that we discovered the value of a good understanding with Great Britain; and it was then that we began to realize the possibility of future trouble with Germany. It is generally understood that we retained authority in the Philippines at the urgent request of the British Government, in order to protect all interests in those islands and to prevent the conflict that would have arisen if we had withdrawn and left Spain helpless as against what would have been the demands of the Berlin government.

A Worthy American Record We can now look back so calmly upon the issues that arose twenty years ago that it is hard to recall the intensity and excitement of the political disputes of that period. The Presidential campaign of 1900 was fought on the issue of so-called "imperialism." Mr. Bryan, as Democratic candidate, led the attack in a campaign of prodigious energy and passionate



© Western Newspaper Union

HON. FRANCIS BURTON HARRISON, OF NEW YORK

(Mr. Harrison has been Governor-General of the Philippines for the past six years, and is now in the United States. He declares that the Filipinos were devotedly loyal to the United States during the war, and were eager to serve in the army and navy and to support Liberty loans and the Red Cross. He makes a fine defense of what he calls American idealism in our Philippine policy and is optimistic of the future)

warning; with President McKinley sturdily defending his own policies, and with Theodore Roosevelt (then Governor of New York and recently Colonel of the Rough Riders), as candidate for Vice-President, making his memorable stumping tour, and preaching the gospel of America's new responsibilities in a world that could not longer permit the isolation of a great power such as the United States had become. Not only have we avoided the dangers of becoming imperialistic ourselves, but it has been our lot to play a prominent part in helping to deliver the world from the menace of a selfish imperialism backed by military power.

Our Guardianship of Maturing Wards

Our enhanced power in the Western Hemisphere has been used generously, and has helped to bring peace and prosperity into regions that otherwise would have been victims of continuous turmoil. Hardly any country has prospered in recent years more greatly than Cuba; and this has been due to the working out of our policies of twenty years ago. Porto Rico shows a transforming progress. Panama and Central America have increasingly bright prospects. So much has been accomplished in the Philippines, in the working out of our beneficent policies, that there is little but praise from those who are competent to judge in a large way. There are always details that invite criticism in every governmental or political situation. Through this recent period of five years past the Filipinos, like the Cubans, have realized that it has been fortunate for them to be in close relations with the United States. The movement for Philippine independence in the early future has not died out; it is alive and awake, and influential Filipino leaders have for some time been in the United States urging their views and studying sentiment here.

Philippine Aspirations

In view of unrest in all lands just now, it will be well for the Filipino people if they are not too eager to detach themselves from this country, which has so sincerely endeavored to aid them in creating a national life, and in preparing for the most complete exercise of self-government. There is no serious question of our own welfare that is involved in the future of the Philippine Islands; it is first of all a question of the welfare of the inhabitants themselves. Incidentally, there are people of many nationalities—including citizens of the United States—who have property interests and rights in the Philippines, which are entitled to the protection of a good government capable of maintaining order. Beyond that, however, it is now the opinion of Republicans as well as of Democrats that the Philippine Islands are not to be retained by the United States as part of an outlying empire, and that our national mission there has been one of guardianship and friendly help, which by virtue of its success is temporary rather than permanent. There may come a time when the League of Nations is so well established that it would be fitted to take over the protection of a young republic such as the Philippine Archipelago is rapidly becoming. But until the League is sufficiently established to assume such responsibilities, it would be unsafe for the Filipinos, and unwise from other standpoints, to have the special protection of the United States withdrawn from the islands and the adjacent waters. Even with Philippine independence, there should exist some such special arrangement as that which now gives Cuba the full benefit of Uncle Sam's protecting friendship.

The New Burdens of Administration In the working out of the issues and problems following the Spanish War, the people of the United States—as we can now perceive—have had an experience which has done them more good than harm, although for several years we were vexed and anxious. We have now begun once more to experience some of the depression and anxiety that inevitably come, as the aftermath of every great war. Elation is felt in the moment when the carnage ends; and even the vanquished feel a great sense of relief and escape, even though they cannot make public demonstration of joy. Courage for the terrible exactions of war is found in the intensity of the effort that war-time demands. But the ending of war permits a certain relaxation; and the problems of readjustment present themselves at a time when nations grow conscious of their fatigues, and realize the extent of the changes and disturbances that war has produced. In the war struggle, we were ready to incur colossal liabilities, and could not haggle or hesitate. We made profound changes in the structure of economic society. We turned millions of men away from production, to the bearing of arms. But when the war is ended we are compelled to sit down and count the cost; and we have to face the simple, unavoidable fact that all of us—not merely those who are beyond middle life, but even those who have been born since the armistice date—will have to spend all of the rest of our lives bearing burdens of one kind or another imposed upon us in this war period, or arising from it.

Practical Aspects of Relief Thoughts like these, in days of reaction and fatigue following the end of actual warfare, are not conducive to universal cheerfulness or harmony. The case can be stated in a very gloomy, pessimistic fashion. It can also, however, be dealt with in a sensible and cheerful way. The path of reality lies somewhere between enthusiasm for the millennium that has not arrived, and pessimism on the score of a calamitous future that can and will be avoided. The great, overshadowing loss is that of human life which has brought sorrow to countless millions of people and has deprived nearly all European countries of a large percentage of their best young citizens. France, for instance, has three million less population than five years ago. Next in order of evils comes the continuing and prospective human loss due to hunger,

SIR ARTHUR PEARSON, THE ENGLISH PUBLISHER AND PHILANTHROPIST

(After a brilliant career in journalism and in the building-up of a group of newspapers and periodicals, Sir Arthur lost his vision several years ago. Many English soldiers have been blinded in the war period, and Sir Arthur—who is president of the National Institute for the Blind—has developed a great institution, St. Dunstan's Home, for training these disabled men in new and valuable ways to earn their own livings. He is a typical leader in a kind of work for soldiers that is going forward throughout England; and his presence in the United States is stimulating similar undertakings here)

disease, and all the miseries that follow in the train of war. The deadly burdens of starvation and immediate poverty that many parts of Europe and Asia are now bearing must be met in a spirit of unwearied generosity by all who have it in their power to help. The worst phases of this situation can be dealt with in the next few months. There will be a desperate attempt everywhere in Europe to produce food during this approaching crop season. Immediate help with seed and implements, and with surplus food for a brief period, will probably suffice.

Preparing for the Steady Pull

The restoration of more complex forms of industrial life, and the establishment once more of the comfortable standards of living that had existed before the great war, will require a longer time in various parts of Europe. During the present year 1919 much attention must be given to emergencies; and the longer and steadier pull of "reconstruction," so-called, can hardly make a fair beginning until next year. Meanwhile there is no reason at all for ceasing to rejoice—as we rejoiced three months ago—that the war is over and that the movement of American armies is steadily homeward. The questions that have arisen, whether those of the emergency type or those of the long, slow pull, can all be answered successfully. Even if there were grounds for discouragement there would be nothing gained by an attitude of doubt and anxiety. The problems, whether public or private, that concern Americans, have to be met as a part of the day's work and dealt with as they present themselves.

War's Appalling Expenses

Taxes will be heavy, and the tax laws are far from perfect. For the national treasury alone we are now to raise six times as much money in a single year as we were raising only a few years ago. Yet it has been the intention of Congress to apportion the war taxes in such a way that the livelihood of no man would be unduly impaired. The bulk of the taxes must be paid out of the incomes of corporations and of wealthy individuals. The system in itself is not one that is designed to impoverish the people of the country. Nevertheless, as the system is applied, it gathers into the Treasury in a given year a great part of the nation's current wealth that would in ordinary times constitute the new capital wherewith to expand productive enterprises. The thing that may well cause anxiety is not the system of taxation but the continuing scale of public expenditure, which requires the raising of such huge sums by taxes and such great additional sums by the further sale of Government bonds.

Financial Relief in 1921

It must be remembered, however, that peace has not yet come in final terms. An armistice means the cessation of hostilities; but until a peace treaty is signed we are legally at war. We were preparing with all our might for a war that was to culminate in the expected campaign of 1919. The ending of actual fighting in November, 1918, found us so committed to military expenditure—with some 4,000,000 men under arms—that it was impossible to make a sudden transition from war-time to peace-time expenditures. Other nations—especially Great Britain, France, and Italy—are in like condition. Victory, as one must understand, brings with it expensive responsibilities. The conquered country may be forced to disarm so completely as to be spared much of the expense of maintaining great armies and navies. One of the chief practical arguments for the League of Nations is the belief that it will permit radical reduction of armaments, and relief from the burdens of war taxation. But such relief can hardly be experienced sooner than the year 1921. It would be poor economy, and bad foresight, to throw away all of our military experience, and to smash forthwith the costly appliances of war that we may yet need in the business of helping the chaotic world to settle down under the sway of law and order.

Costly Retrenchment in the Past

There is always a tendency to wasteful expenditure of public money at Washington; but there is also a tendency to wasteful kinds of retrenchment. Our refusal to spend a reasonable amount of money for the Army and Navy in the period following the Civil War, when we were paying off the national debt and developing the country, meant that we were carrying nothing like a sufficient insurance policy. If our Navy had been larger, our diplomacy would have liberated Cuba, and the war with Spain would have been avoided. After that war, our international obligations were immensely increased. Our new position required a proper provision of means by which to use our latent strength—not for aggression, but for justice and safety, in a world that seemed to be approaching a crisis and a turning-point. There were many indications favorable to arbitration, disarmament, and the establishment of peace. There were, on the other hand, some very dangerous tendencies toward the growth of militarism and imperialistic rivalry—tendencies especially seen in the policies of Germany.

The Immediate Lesson

After our experience in the Spanish War, with our construction of the Panama Canal, and our new relationships to the world, it would have been wise and prudent to increase our Navy to a marked extent; to have provided

for a system of military training; and to have planned for a proper supply of rifles, machine guns, and artillery. If we had made such preparation, it is quite possible that a large part of the anarchy and misery of Mexico in the last seven or eight years would have been avoided. We should certainly have suffered far less loss of life and expenditure of resources in our war with Germany (while also saving still greater expenditures for our Allies), if we had been prepared in advance for self-defense, and had not left everything except our small though admirable Navy to be improvised after we had actually gone to war.

The Army and Navy Still Needed

We shall now, in the desire to lessen our financial burdens, be tempted once more to neglect a reasonable policy of preparedness. The League of Nations, and the ultimate escape from huge military expenditure, will come the more certainly if we prepare ourselves to support our principles with the argument of efficient power. Universal military training can now be easily established, through a very moderate use of the training and experience of those young men, in every neighborhood of the land, who will have returned from a period of intensive drill and instruction. Such a system need not be very expensive. The further naval preparation advocated by the Administration, and accepted by the House last month, ought to be supported in view of the uncertainties that lie in the immediate future. For some time to come, the security of the oceans and perhaps the maintenance of peace throughout the world is to depend much less upon armies than upon the joint navies of Great Britain and America. The other Allies will not now have the resources available for much naval increase. Our air service must also be developed.

Our Navy for Security

As events have shaped themselves, the navies of Great Britain and the United States are destined to work in close coöperation; and they are beyond all question going to be committed to the support of conditions, which, while securing the safety of the English-speaking world, must also be beneficial to all other peace-keeping nations. The idea that America, with her immense interests in the Atlantic and Pacific and her guardianship of the Western Hemisphere, would give offense to Great Britain by building up a strong navy has nothing substantial to rest upon. We owe it to ourselves and we also owe it to the world at large to take a full share in the business of patrolling and protecting the great common domain of the seas, which belongs—for freedom of use—alike to all nations, and which must ultimately be governed in the full sense by a League of Nations. It is not likely that such a league can enter upon its functions of control over the oceans for thirty years, and perhaps not till fifty or sixty years have elapsed. True safety and economy require that, meanwhile, the United States should play its part on the seas. Failure to take our proper place in earlier periods has subjected us to unmeasured expense and loss. We should have learned our lesson by this time. And certainly we have given sufficiently convincing proofs to the British people and also to those of France that our naval expansion is to be for their welfare and in no sense to their detriment. We are not planning any future that repudiates the principles of the great cause in which we have been fighting side by side with the peoples of Western Europe and those of the British dominions.

HON. JULIUS KAHN, OF CALIFORNIA

(Mr. Kahn, as ranking Republican member of the Military Committee of the House, has been one of the foremost of Congressional leaders in the war period. He will be chairman of the committee in the new House, and will endeavor to secure a system of universal training with brief terms of military service intended at once to provide for the national defense and to build up the young men of the country in physical vigor and valuable citizenship)

President Wilson's Mission

When these comments are printed and in the hands of our readers, it is likely that President Wilson will have reached Washington in order to sign bills and to be in contact with Congress during the days which not only conclude the Session, but which (on March 4) end the period for which the Sixty-fifth Congress was elected. So much has been happening that it may be well to set down a few significant dates. Mr. Wilson and the other members of the Peace Commission sailed on the *George Washington,* leaving New York December 4 and arriving at Brest on December 13. The President immediately proceeded to Paris, where he spoke on the bonds of friendship between France and the United States. During the next few days he was made a citizen of Paris; visited Premier Clemenceau; exchanged visits with King Victor Emmanuel of Italy who had arrived in Paris; conferred with Premier Orlando and Foreign Minister Sonnino regarding Italy's territorial claims and aspirations. This first Parisian week culminated with exercises at the Sorbonne, where he received an honorary degree from the University of Paris on December 21.

PRESIDENT WILSON AND KING GEORGE AT BUCKINGHAM PALACE

Reception in England

On Christmas Day the President reviewed American troops near General Pershing's headquarters at Chaumont and made an address, after which he proceeded at once to England and was met at the Charing Cross Station by the King and Queen and taken to Buckingham Palace, along decorated streets and in the midst of great popular demonstrations. The following day, December 27, was spent in a long conference with the British Premier, Mr. Lloyd George; and in the evening a notable banquet was given by the King with an exchange of assurances regarding the oneness of purpose of the British and Americans and the associated Allies. On December 28 the city of London entertained Mr. Wilson, who spoke in advocacy of the League of Nations, while Mr. Lloyd George announced that his conferences with the President had resulted in agreement on fundamental principles. The visit to England was ended with a quick trip to the North in order to spend Sunday at Carlisle, the home of his mother's family, and to make addresses at Manchester on the following day.

A Trip to Italy

The next episode in the President's European visit is the trip to Rome, where he arrived on January 3; was welcomed by King Victor Emmanuel and Queen Helena; and made an address before the Senators and Deputies advocating the League of Nations as a substitute for the discredited "balance of power." The remainder of his Italian sojourn included a call at the Vatican; some glimpses of historic places; stops at the great northern cities of Genoa, Milan, and Turin, with speeches at all these and at other places, and with the result of a marvelous expression of Italian goodwill towards the United States. There followed another week or two of preliminary work at Paris with informal but serious discussions among the delegates of America, France, Great Britain, Italy and other countries—all of which was necessary as a prelude to the formal work of the Peace Conference. The Supreme War Council meanwhile had the armistice program to consider, and all the complicated questions having to do with military occupation and control not only during the period preceding the peace settlement, but during a subsequent period when Germany's obligations were to undergo fulfillment. Mr. Wilson's own especial attention was given to the committee that was drafting the League of Nations.

The Conference in Session

At length, on January 18, the Peace Conference began its regular sessions with Mr. Wilson attending as an American delegate. The President of France made the welcoming address, and Mr. Wilson proposed Premier Clemenceau as the permanent Chairman. The business of the Conference thereupon went forward efficiently, and the rules of procedure were made public. The delegates of the five principal Allied powers were to be active in all sessions, while the smaller Allied nations were to take part in the Conference whenever their own problems were concerned, and neutrals only when invited for particular reasons. In the apportionment of representatives, the Great British Dominions and India were allowed delegates of their own, apart from those of Great Britain. Some of the smaller nations at first were disappointed because they were allotted only one or two delegates; but they soon learned that this put them to no disadvantage. Each country has at Paris as many advisors as it chooses to have; and the Conference through its committee system gives every question the benefit of all the wisdom available. Small powers, both belligerent and neutral, have their ablest men assisting.

The Main Issues Under Discussion

On January 20 President Wilson attended a luncheon given by the French Senate and paid a tribute to the qualities of France as exhibited in times of stress and difficulty. The need of some kind of touch with Russia was so generally felt in the Conference that President Wilson on January 22 suggested a plan which was adopted. It was agreed that the Allies should send representatives to Princes' Islands in the Sea of Marmora, in order to consult with representatives of the different regions and factions from territories formerly Russian. The place chosen is near Constantinople, and we shall refer to this curious conclave more particularly next month. Behind the scenes, as well as in popular addresses there has been constant discussion of the League of Nations; but the proposal as a formal matter in the Peace Conference itself began on January 25 with a speech by President Wilson, who advocated the League as necessary for the settlement of existing problems as well as for maintaining peace in future times. The next day being Sunday, President Wilson visited the ruined cathedral at Rheims, and had a glimpse of battle scenes at and near Château Thierry.

PRESIDENT WILSON AT THE PEACE CONFERENCE

Good Progress in February

The last week in January and the first two weeks of February were devoted by President Wilson to the business of the Conference chiefly as regards the more unsettled features of the scheme for a League of Nations. Fortunately, before he sailed on the 15th for the United States most of the sections of the Constitution of the proposed league were ready to present. Furthermore, it was fully admitted that the leaders of the Conference had made some progress toward the adjustment of a number of the crucial issues with which the Conference must deal. Considering the unprecedented range of the issues presented, affecting all the countries of the world, it is only reasonable to admit that much has been done in a very short space of time. All the great problems of the universe will be adjusted by the Peace Conference at Paris in less time than our Interstate Commerce Commission has usually taken to deliberate and decide in the matter of a shift in a disputed freight rate; and in less time than our Congress takes in dealing with some of the most obvious things that come before it.

Publicity and the Peace Conference In our comment last month we endeavored to point out the significant fact that the work of the Peace Conference at Paris is being carried on with hundreds of millions of people reading about it from day to day, and with public opinion actively exerting itself through all sorts of agencies to help shape the results. Nothing of this kind has ever happened before in the history of the world. For example, great meetings have been held all over the United States under the auspices of the League to Enforce Peace with the object of crystallizing American opinion and bringing it to bear upon the decisions of the Peace Conference on the subject of the League of Nations. In the Houses at Washington, particularly in the Senate, there have been extensive debates, the object of which has been to influence opinion at home and also to affect the course of affairs in Europe. An immense volume of discussion, from the pens of the largest and ablest body of journalists ever before assembled, has come to America by ocean cables and by wireless as well as by the slower movement of the mails.

World-wide Discussion All of our newspapers of any character and standing have been full of interesting and useful dispatches and articles about the various questions following the Great War. These matters in like manner are being discussed by the important newspapers of Great Britain and of every European country. South America is following the course of affairs at Paris and in Europe with close and intelligent attention. This is obviously true of Canada and Australasia, and the same thing may be said of Japan, India, and China. Questions and issues which, only a few years ago, were not interesting to more than one American reader in a thousand, are now given sensational importance each day by great headlines. Millions of Americans have gained some real knowledge of geography and international matters, and of course the same thing may be said of masses of readers in other countries.

Educating a Thousand Million People The simple fact that the whole world is now engaged in a simultaneous study of the problems of peace, and the questions that affect particular nations, may be very plausibly presented as an argument justifying prolongation of the work of the Conference. The world is thinking and studying as never before, and there is in process of rapid development that great fabric of international public opinion, which more than anything else is to prevent future wars and to make influential and useful the proposed coöperative society known as the League of Nations. A thousand million people may be said to have entered this great school of world study. It is not merely that each nation which has claims—or which is resisting the opposing claims of some other nation—brings its case to the attention of a small body of diplomats and statesmen assembled at Paris. The opportunity is much more important than that. It is the opportunity to bring an issue into the limelight, and to secure for it the attention of the press and the thinking public of the whole world.

Many Appeals for a Public Verdict Thus the Irish question is in a strict sense the business of the people of the two islands that form the United Kingdom. Nevertheless, the leaders of Irish discontent are managing to get their subject aired in the press of the world; and this may help to bring a settlement. There are issues pending between Japan and China in like manner, which are forced upon the attention of the world forum. Some of the statesmen of Colombia are proposing to bring their Panama grievance

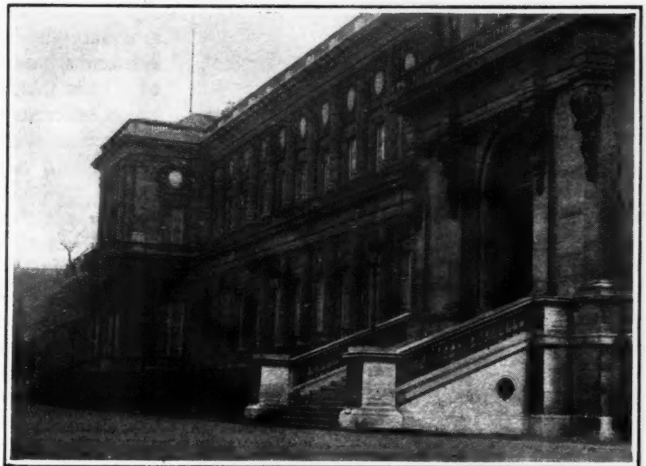
© George Matthew Adams

GETTING RID OF THE FAMILY SKELETONS

[The practice of open discussion is already bringing to light many sources of contention, and publicity is aiding prompt solutions.]

From the *Spokesman Review* (Spokane, Wash.)

against the United States before the Paris tribunal, not so much for a specific settlement as for a public verdict upon the rights and wrongs of the controversy. Many of the leaders in India have attempted to use the Conference to help secure some advance towards independence. Far more immediate, of course, are the questions affecting the boundaries of European countries. Of such questions there are a very large number, and every one of them is exciting the interest of bodies of people remote from the scene, who are trying to influence action at Paris. Societies have been formed in the United States to support every European claim imaginable. This is not a bad thing, but on the contrary an exceedingly good sign. It shows that powerful statesmen and diplomats can no longer get together and determine (for their own reasons of policy) the futures of waiting and helpless nationalities. Every question will have to be exposed to view, and discussed upon its pure merits from every standpoint.



© Western Newspaper Union

THE BUILDING OF THE FRENCH FOREIGN OFFICE ON THE QUAI D'ORSAY, PARIS, IN WHICH THE SESSIONS OF THE PEACE CONFERENCE ARE HELD

How Wars May be Prevented

It is easy to see how important a bearing all this discussion has upon future wars. However far the League of Nations may be permitted to go, as it is now being formed, it will certainly go far enough to secure a period of discussion for every dangerous dispute before there can be an appeal to arms. It may go so far as to require, besides the period of discussion and the opportunity for conciliators to do their work, the voting of war declarations by legislative bodies, and may demand a popular referendum, before a nation enters the arena of war.

Wilson as a Promoter of Discussion

In the center of all this useful discussion, in the newspapers of the world and from thousands of platforms and pulpits, has stood the President of the United States, Woodrow Wilson. Precisely how much any definite formulation of a Peace Treaty or the project for the League of Nations has been accomplished by Wilson's leadership, we do not know. But that his going to Europe and appearing before the peoples of three great countries, while conferring constantly with their statesmen, has popularized the business of the Peace Conference and helped to make it the affair of democracies rather than that of Prime Ministers and ruling groups, there can be no doubt whatsoever.

Good-Will to Be Maintained

A few months ago there was overwhelming determination that wars must end, and that military autocracy and commercial imperialism must not lift their menacing heads again. There must be no abandonment now of the high resolves of last summer. Germany—perhaps alone of all the nations, when the tide began to turn at Château Thierry—was still possessed of the devil of arrogance and impelled by tribal conceit and ambition. Seemingly, Germany has not even yet been sufficiently chastened to become in the immediate future a desirable neighbor. But the German object lesson will not be lost upon other nations. Peace is worth a great price; and friendliness and generosity are pearls beyond price, between nations as between individuals. The fine impulses that the Allied nations have shown in many ways during the period of their sacrifice and trial are to be cherished and maintained. It must be the privilege of the United States to help support for the future the unselfish professions of the recent past. To the people of Europe President Wilson has seemed to represent this high-mindedness of the United States. Whatever influence helps to make this kind of an atmosphere for the peace negotiations is contributing greatly toward the best results.

© International Film Service

PREMIER CLEMENCEAU, SEVERELY WOUNDED BY AN ANARCHIST'S BULLET ON FEBRUARY 19

Differences Not to Be Smothered It would be rather suspicious than otherwise if the dispatches from Paris had brought nothing but strains of brotherly love and heavenly harmony. The problems to be adjusted are of such a nature that it would be quite impossible to settle them without many differences of opinion in the course of the proceedings. It is encouraging that whenever any differences appear they are megaphoned over seas and across continents. Surely no sensible American supposed that President Wilson could go to the Peace Conference and dictate to it on the one hand, or soothe it on the other hand into such eagerness to make everything unanimous that real differences could have no airing. Mr. Wilson's presence in Europe has brought out demonstrations of good feeling towards America that were sincere. His utterances in turn have helped to strengthen the European belief in America's continued reasonableness and sanity. There has been commendable frankness, and remarkable harmony in view of all the facts. Mr. Simonds shows us that the Conference has hard work ahead; but differences will be reconciled.

The French Point of View Meanwhile, it is a mistake to think that the settlement of one thing has waited upon another, or that Mr. Wilson's interest in the League of Nations has postponed the definitive Treaty of Peace. A hundred questions have been under consideration at Paris, while each of them has been growing more ripe for settlement as affairs have taken their course all the way from Finland to Mesopotamia. Reactions in France could not have been avoided. The appalling realities of the war are better understood to-day than while the conflict was in progress. France is to have much sympathy and some assistance; but the roseate future that it is easy for thoughtless strangers to predict must be attained through painful effort. It is not surprising that the French press should give emphasis to concrete facts. The French are interested in obtaining reparation for present losses, and in having guaranties against another war. They dread the recovery by Germany of her economic power. They are entitled to the kind of a peace treaty that will protect them from another German attack.

Revenge Must Be Forgotten The United States and Canada are good neighbors and will remain so, but along our Mexican border we are maintaining a very costly military patrol, and there is utter lack of neighborliness between Mexico and our country. Statesmanship must find a way to allay Mexican prejudice and to create friendship. In like manner the peace of Europe can only be kept in the long run by getting rid of differences, by accepting facts, and by exchanging enmities for relationships of mutual esteem. If Germany thinks "revenge" in her heart, there is no prospect of lasting peace. It is not likely that a final treaty can be made with Germany before May, and it may be later. Armistice renewals may require further occupation of German territory. It will be fortunate for Germany if she can accept her defeat in good faith. If she is to be kept from building up armaments in future to menace her neighbors, she must, of course, have reasonable assurance that she will be protected in turn from assaults by Russia,

Poland, or other neighbors. It would seem that the only way to give such assurance is to create the League of Nations, and in due time to admit her along with her neighbors as members of such an association. She must, of course, convince the world of her good faith, and pay her bills without flinching.

The New German Government

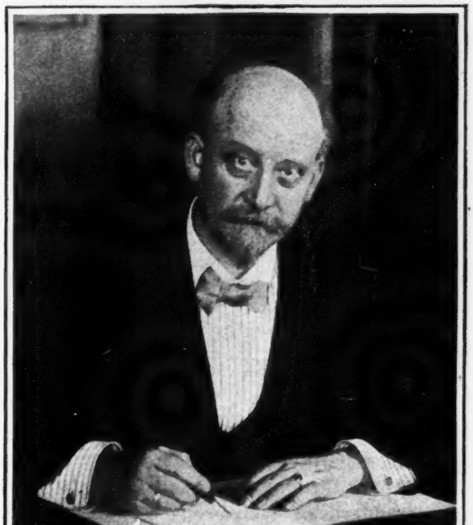
Sensible people in the Allied countries have not wished to see Germany torn to pieces by the criminal conduct of anarchists, and the fanaticism of Bolshevist groups. The orderliness of the assemblage at Weimar made a good impression. The delegates had been chosen seemingly in honest elections, and by a broad franchise. It was an unexpected mark of coherence that the constitution as previously drafted by the temporary government of Herr Ebert should have been unanimously adopted by a convention composed of so many different parties and elements. This instrument, adopted on February 10, is called a "provisional" constitution. Herr Frederich Ebert was elected President of Germany, receiving a total of 277 votes out of 379. It was announced that the new ministry would have fourteen members and that Philipp Scheidemann had been named as Chancellor. In this new cabinet the Socialists have seven seats, the Democrats three, and the Centrists have two besides their leader, Erzberger. Count von Brockdorff-Rentzau continues to be Foreign Minister.

Germany's Condition

Some reports from Germany, credited to American and British officers, indicate a general paralysis of business activity and serious lack of food. The French military leaders have declared that Germany could put three million men in the field within a few weeks, and use such warnings as a basis for their demand that large Allied armies remain permanently in France. A British authority, in reply, declares that Germany could not possibly feed a large army for more than a week or two; that means of transport are now totally lacking in Germany; and that military material has been so largely surrendered that Germany could not, for a long time to come, contend with nations having ready at hand their supplies of artillery, aircraft, and the like. Evidently, however, the Germans have not looked the situation frankly in the face. Ebert and other leaders have been making unwarranted criticisms, in threatening tones. They cannot be permitted to evade the Armistice terms. There are said to be 800,000 German prisoners still in France. No day should be allowed to pass without witnessing the work of restoration in Northern France and Belgium advancing at the rate of one good day's work for each of 800,000 men.

The King and the New Parliament

The new British Parliament elected in December began its opening session on February 11. King George made an address summarizing general conditions. He declared that the discussions at the Peace Conference had been "marked by the utmost cordiality and by no disagreement." He praised the agreement at Paris "to accept the principle of the League of Nations, for it is by progress along that road that I see the only hope of saving mankind from a recurrence of the scourge of war." He referred to the enthusiastic welcome accorded to the President of the United States by all sections of the British people. He expressed his especial satisfaction that the self-governing Dominions, and India, were directly represented in the Paris Conference. He spoke for the program of social reform in England, saying among other things: "We must stop at no sacrifice of interest or prejudice to stamp out unmerited poverty, to diminish unemployment and miti-



HERR PHILIP SCHEIDEMANN

(The new Chancellor of Germany in the government provided at Weimar last month by the constituent assembly)

© Underwood & Underwood, New York

PREMIER LLOYD GEORGE, WHO ADDRESSED LAST MONTH THE NEW BRITISH PARLIAMENT

gate its sufferings, to provide decent homes, to improve the Nation's health, and to raise the standard of well-being throughout the community." He referred to the decision to create a new ministry of Public Health and also a Ministry of Ways and Communications, and to various other measures such as the housing problem, agricultural improvement, and land settlement. Never has a king made a broader or a more democratic appeal.

The Premier Expounds to the House

Mr. Lloyd George's opening speech to the new Parliament expressed regret at the absence of Mr. Asquith, who had lost his seat after thirty years of continuous service in the House of Commons. He did not think it the right moment to discuss the work of the Peace Conference, but assured Parliament that everything would be laid before it in due time. He referred to the vast range of the problems which this Conference had to settle. He said that an able commission representing all the great powers was considering the responsibility of individuals for starting the war; and also that "a singularly able Commission" was dealing with the question of the indemnity to be exacted from enemy countries. He said that the League of Nations was an experiment "full of hope for the future and it will be tried with the full assent of the nations, great and small." The most important part of Lloyd George's speech had to do with labor unrest in Great Britain. He regarded the intense strain of four and a half years as sufficient to produce an unsual frame of mind. He pointed out various legitimate causes of social unrest. He proceeded with an elaborate discussion of the labor situation, advocating public improvements to give employment. On the other hand, he denounced the strike tendencies, and declared that England would not submit to mob-rule by striking bodies making unreasonable demands and claims.

Labour and Reform in England

In England more than in America it is the generally accepted doctrine that social reforms following the war are to be so sweeping as to constitute something like a revolution; but political and industrial leaders are determined to accomplish the transformation by lawful and peaceful methods and not by storm and strife. Most of the labor claims as set forth in the recent platform of the British Labor movement have to do with broad national policies. Military conscription is opposed; a League of Nations is favored; Home Rule for Ireland and for other parts of the Kingdom and the Empire is advocated; and there is a large program covering such subjects as tax reform, land nationalization, public ownership of mines and the means of transportation, the rehousing of the people, improved education, equal opportunity for women, and popular control of the liquor traffic. These are the outstanding demands. Much more immediate, however, are the claims for short

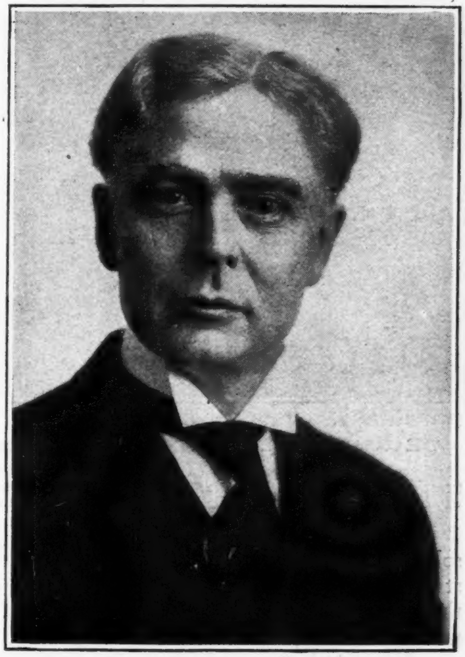
hours, high wages, and the practical control of industry by the trades unions. First in importance last month was the demand of the Miners' Federation, which has 800,000 members, for shorter hours and larger pay. A six-hour day and a 30 per cent. increase over war wages constitute the claim of the coal miners. It is held, on the other hand, that cheap coal is so necessary to other industries that the full claim of the miners cannot be granted.

Strikes and Radical Demands

Historically, the miners have had a hard struggle for decent conditions. They are probably asking more just now than can be granted, but they are sure to make gains. The National Union of Railwaymen (400,000 members) ask a forty-eight hour week and a voice in the control of the railways; while the transport workers (250,000 men) ask a forty-four-hour week and a 20 per cent. wage advance. These claims are typical of the existing labor situation in England. Many unions are demanding a seven-hour day, with favorable conditions of various kinds. Such trades as those of shipbuilders and carpenters are involved, and even Government employes, like the postal workers. All over the United Kingdom in January and February there were labor disturbances indicative of the reaction that was to have been expected with the ending of the war, while also showing the clear determination of labor to establish something like a universal eight-hour day, and to make all the conditions of industrial life more favorable for the social advancement of the people as a whole. Some of the largest strikes were in face of agreements, and were opposed by labor leaders; but the movements were spontaneous and hard to restrain. The great shipbuilding towns of Belfast and Glasgow have been through experiences that were serious enough to divert the attention of the British Government for a time from Paris war adjustments to domestic turmoil.

Shorter Hours for Textile Workers

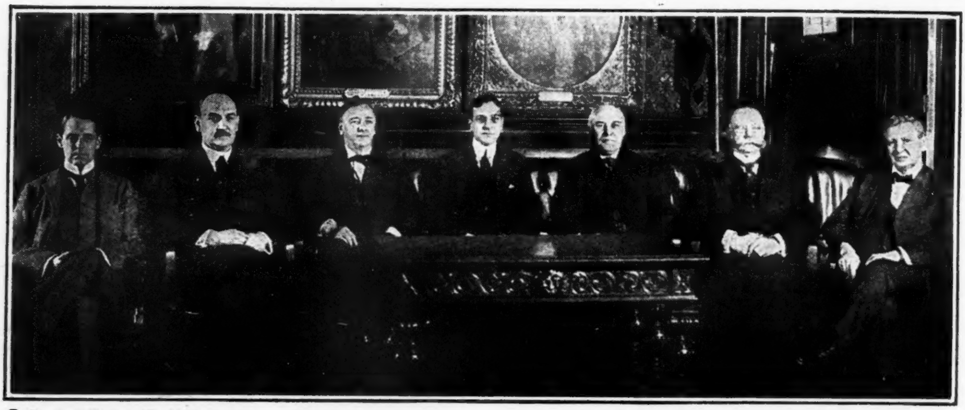
In the United States, from the social standpoint, the most significant strikes have been those among the New York garment workers and in the Eastern textile mills. Scores of thousands of people who make the clothes for American men, women, and children have gone back to work after winning their demand for a forty-four-hour week. This means eight hours for five days and four hours for Saturday. Only a few years ago the majority of these garment workers were taking their bundles from the manufacturers to the sweat-shops, and working sometimes sixteen hours a day. They now work with good light and ventilation, in fireproof buildings, and their gain of the forty-four-hour week is to be deemed a triumph for American civilization. It follows, however, that with more leisure these clothing workers throughout the country must be held to higher standards of citizenship. Most of them are recent comers to America, and those who are not already naturalized should be made to meet real tests as to their ability to speak, read, and write the English language, their knowledge of our institutions, and their personal fitness for citizenship. In the textile industries the demand in general has been for a forty-eight-hour week, with an obvious tendency to acceptance of this basic principle all along the line.



HON. OLE HANSON, MAYOR OF SEATTLE
(Who does not permit constituted authority to be usurped by law-breakers)

Firm Action in the Northwest

The great strike of some 25,000 workers in the shipyards at Seattle was followed by a local sympathetic strike on February 6 which for a brief period paralyzed the activities of the city. Mayor Hanson arose to the emergency and, with an enlarged police force aided by



© Harris & Ewing, Washington

THE COUNCIL OF NATIONAL DEFENSE AT WASHINGTON, ENGAGED WITH THE PROBLEMS OF RECONSTRUCTION

(From left to right, are: Grosvenor Clarkson, Director of the Council; David F. Houston, Secretary of Agriculture; Josephus Daniels, Secretary of the Navy; Newton D. Baker, Secretary of War; Franklin K. Lane, Secretary of the Interior; William C. Redfield, Secretary of Commerce; and William B. Wilson, Secretary of Labor)

soldiers from Camp Lewis, he quickly demonstrated his ability to vindicate public authority. He announced his determination to maintain such public services as light and transit; and the sympathetic strike came to an end in a very short time. The I. W. W. element had become assertive, many of its members in Seattle being foreigners. Their attitude was that of lawless revolutionaries; but Mayor Ole Hanson armed his thousand extra policemen and defied the anarchists. He made a statement on February 8 from which we quote the following sentences:

> The labor unions must now cleanse themselves of their anarchistic element or the labor unions must fall. They are on trial before the people of this country. I take the position that our duty as citizens stands ahead of the demand of any organization on the face of the earth. The union men, the business men, the churchmen, must first of all be citizens. Any man who owes a higher allegiance to any organization than he does to the Government should be sent to a Federal prison or deported.

The labor movement when properly conducted is entitled to due consideration. Every thoughtful citizen desires to see the economic and social condition of workers improved as rapidly as possible; but the people of the United States will not tolerate Bolshevist methods, and there is universal applause for the firmness and vigor of the mayor of Seattle. Resolute action in Seattle was followed by the collapse of a general strike that had also been called in the neighboring city of Tacoma. At the great mining center of Butte, Montana, the I. W. W. are a powerful influence, and they encouraged a strike which became extensive last month and which led to the employment of soldiers for the protection of the mines.

Unemployment, and Remedies At the beginning of February the Secretary of Labor, Mr. Wilson, reported 262,000 unemployed men in 123 industrial centers as compared with 235,000 the previous week. He urged before Congress committees the passage of legislation to furnish immediate employment as a "buffer" measure, and as a protection against the spread of what he called "the philosophy of force" in the United States. It is the general opinion of experienced men that useful public works ought to be entered upon promptly throughout the country. The Council of National Defense, which includes six members of the Cabinet with Secretary Baker as chairman, has taken on fresh vigor and is directing its energies towards the problems of reconstruction under the leadership of Mr. Grosvenor B. Clarkson, who was formerly its secretary, and now holds the position of director. It has been studying demobilization and unemployment.

Work of the Defence Council The Council serves as a focus or a clearing house for many Government departments and agencies in their relation to such subjects. It is revivifying, for the new period, the local Councils of Defense which were organized for war work in States, counties, and towns, and which now comprise 184,000 units. Its methods include appeals to public opinion, as

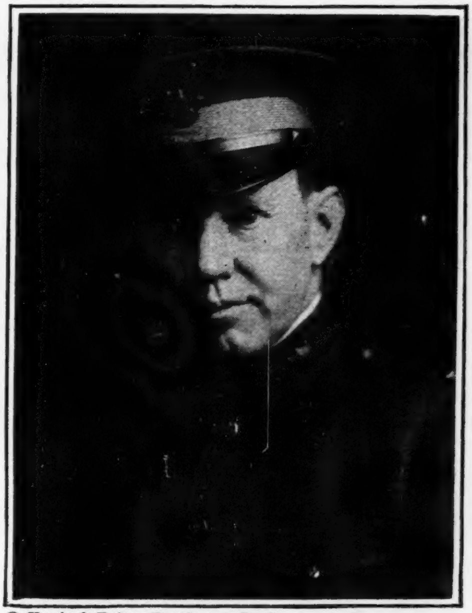
well as endeavors to secure timely legislation. Thus on February 14 Mr. Clarkson issued a statement on behalf of the Council advising the country, for several good reasons, to buy commodities at once that are to be needed in the near future. Across the country the Council has spread the injunction, "Buy only what you need, but *buy it now!*" The buying power of consumers is ample, and the general resumption of purchasing activity would put quick life into many industries and help to tide over a period of restlessness and unemployment. The Council of National Defense has transmitted to the local councils a series of very valuable suggestions regarding the duty of every community towards returning soldiers. There has also been sent out what is called the "Program for an Organized Community"—a comprehensive scheme that is very stimulating in its proposals.

The Lane Policies in Congress

In terse and characteristic fashion, Secretary Lane states for our readers, in this number, his policies of land improvement and public work for home-coming soldiers. So well considered a program as that which is set forth in his statement and in the more extended article which follows by Dr. Elwood Mead, has seldom been brought forward in a moment of opportunity and need. It has been difficult to teach the country to understand the waste and loss due to lack of a sound system of rural economy. Congress has become awake to the need of encouraging the building of good roads; but land improvement is an even more fundamental thing, and the greater project would naturally involve the lesser. Congress seems practically to have decided upon a compromise measure in the matter of the leasing of public lands containing petroleum, coal, and phosphate, and as respects the development of hydro-electric power on the public domain and the navigable rivers under Federal control. For five or six years Secretary Lane has tried to get such bills passed; and the compromise measures are not precisely what he would have preferred. Yet they are perhaps better than nothing, although Mr. Pinchot and other conservationist leaders are disturbed by some of the clauses insisted upon by the Senate.

Adjusting the Soldiers

As the soldiers return in increasing numbers from France, and as the great camps at home have been rapidly discharging their men, the practical business of fitting them to places



© Harris & Ewing, Washington, D. C.

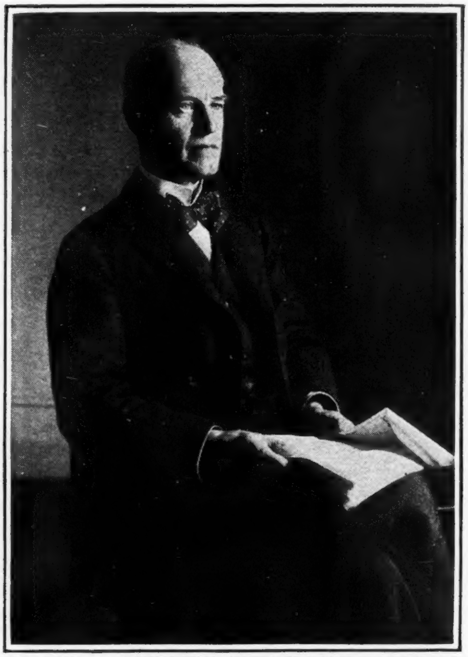
COL. HENRY D. LINDSLEY, DIRECTOR OF THE WAR RISK INSURANCE BUREAU

(Colonel Lindsley, before entering the army, was Mayor of Dallas, Texas, and a very successful man of affairs, who had also been head of an insurance company. He took the Plattsburg training at forty-six, was commissioned a Major, and was ordered abroad, where he became head of the war insurance work. He has recently returned from France to take charge of the immense war insurance office at Washington)

in civil life becomes more urgent each week. Experience now shows that the dismissal of the men in the Atlantic ports rather than in their home neighborhoods has many drawbacks. The plan of having men discharged in custody of the draft boards which enrolled them and selected them, is growing in favor. The best place to send returning soldiers who were enlisted or drafted from a given county in Maine or Ohio or Texas is to the very county from which they entered the Army. The problem of readjusting the great system of soldiers' insurance and allotments is a difficult one, and Col. Henry D. Lindsley, now at the head of that Bureau in Washington has no light task before him.

Welcome Visitors from England

Our task of caring for the maimed and the invalid soldiers is not extensive when compared with that of England or France because of their longer period of fighting. But it is to be feared that we are not as yet doing as much for the invalided soldiers as should be done. We have much to learn from the European experiences, particularly from the successful



MR. JOHN GALSWORTHY, BRITISH MAN OF LETTERS AND WORKER FOR INVALID SOLDIERS

methods employed in England. Mr. John Galsworthy, who arrived in the United States last month as a literary celebrity, has been so absorbed at home in efforts to promote what is called the "re-education" of maimed soldiers, to fit them for new careers, that he has gained for himself a second place of honor and esteem almost equal to that which he had so worthily won as a man of letters. Such visitors as Mr. Galsworthy and Sir Arthur Pearson can do more than the statesmen to touch chords of sympathy between the two great peoples. The arrival of Mr. Philip Gibbs at the same time with Mr. Galsworthy brings to our side of the Atlantic a war correspondent whose descriptions of British fighting gave readers in America as well as in England a daily thrill of pleasure and surprise, in their mastery of an epic style that lifted cable letters above the ephemeral into a place as permanent literature.

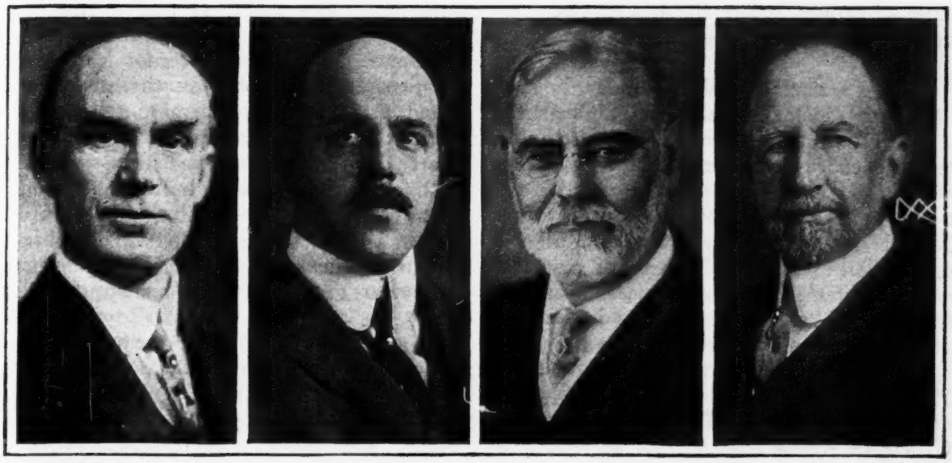
Ships and Reviving Trade

Shipping and foreign trade are topics that are demanding the keenest attention in British and American business circles. Mr. Hurley, head of our Shipping Board, has returned from Europe, where he was occupied with several questions. First, he was arranging to secure a large amount of German tonnage to help bring home American soldiers; second, he was gaining information to aid in dealing with the subject of the operation of our new merchant marine. He is asking Chambers of Commerce and business bodies to help find answers to several of the questions that arise relating to ships and foreign trade. The British people are far more dependent than we in America upon exports and imports, and it is vital to British prosperity that a large volume of peacetime commerce should succeed the war business that monopolized shipping. Some temporary British policies adopted in the re-establishment of foreign trade have been strongly criticized in our Congress at Washington; but the embargoes are to be considered as merely transitional, following the restrictions of war.

MR. PHILIP GIBBS, LONDON NEWSPAPER MAN AND FAMOUS WAR CORRESPONDENT

Free Traders to the Front

Meanwhile those Americans who have long advocated the merits of free trade are now presenting their formulated views to the statesmen at Paris. They believe that there must be great mitigation of economic rivalry, if the League of Nations is to attain full success. There is much to be said in support of the view that protectionist policies have now been largely outgrown, and that the movement toward



© Harris & Ewing, Washington, D. C.

SIMEON D. FESS NICHOLAS LONGWORTH JAMES R. MANN FREDERICK H. GILLETT

FOUR REPUBLICAN LEADERS WHO WILL BE PROMINENT IN THE NEW HOUSE OF REPRESENTATIVES

greater freedom of business intercourse among nations ought henceforth to advance rapidly. Some of the chief arguments for protectionist policies belonged to times and conditions that lie in the past. It does not follow that there should be an unduly rapid or radical abandonment of existing tariff schedules. But surely the League of Nations, and the economic situation following the Great War, must call for free-trade or low tariffs, rather than for prohibitive customs rates.

A Republican Congress

During the half of his second term that remains (dating from March 4), President Wilson will have to deal with a Congress that is Republican in both houses, although the majority in the Senate will be very slight. He has had the advantage of being supported hitherto by party majorities in three successive Congresses. While certain members of the minority have been active in legislative work, the chairmanships of committees have, of course, all been held by Democrats, whose names have been kept prominent. The life of the expiring Congress has coincided with the war period. Most of the great war measures have been supported by the Republican minority on patriotic grounds. The ending of the war restores the freedom of discussion that had been temporarily checked. It is now to be seen to what extent President Wilson and the members of his administration can obtain Congressional support for their measures in the reconstruction period, with Republicans in control of both branches.

Ending of Present Session

As these comments were made, it was impossible to predict the date of the calling of the new Congress in special session. Under ordinary conditions, it would meet on the first Monday of next December, but in these times it will not be possible to carry on the Government without the aid of the legislative branch. There have been pending, in the appropriation bills, matters of the most extraordinary importance; and, as these words were written, there remained a little more than two legislative weeks. The House of Representatives will have sent to the Senate a completed program. The great tax bill, which we explain at length in subsequent pages, will have become a law. The Naval bill, however, carries a large program of new construction specially urged by President Wilson. It passed the House by an overwhelming majority, but the Senate may not be ready for a final vote before the fourth of March. It is probable that the legislation providing for sustaining the guaranteed price of wheat may be completed, and this carries an appropriation of a round billion dollars. But there are other measures of importance that the Senate may not be able to complete. In that case, it would seem necessary to call the new Congress in the near future. The President will, doubtless, have given to the present Congress an account of the progress made at Paris. But later in the season it will be necessary to lay before the Senate the completed agreement forming the League of Nations, and also the Treaty of Peace, which

must be ratified before the war can be considered as ended in a legal sense.

Will the Republicans Harmonize? The Republicans, under the harmonizing influence of Chairman Hays of the National Committee, are endeavoring to forget past antagonisms and act as a unified party. It remains to be seen whether this can be done. Behind the scenes, even more than in the open, there remain differences of principle and conviction, as well as unhealed personal feuds. The Progressive elements demand the disregard of seniority traditions in the selection of chairmen for important committees. It is not yet determined who will be Speaker of the House. Mr. Mann of Illinois, Mr. Gillett of Massachusetts, and Messrs. Fess and Longworth of Ohio are the names most commonly mentioned. In the Senate, Mr. Lodge will by full party consent be chairman of the Foreign Relations Committee; but some of the Republicans who have more liberal tariff views are not willing to support Mr. Penrose as chairman of the Finance Committee. Senator Cummins will lead in dealing with the critical railroad question as chairman of the Commerce Committee.

Presidential Candidates The tendency to rally about the late Colonel Roosevelt as leader of the reunited Republican forces had been strong, and it had been generally conceded in political circles that he would be nominated for the Presidency in the convention that will be held in June of next year. His death has left the party with a sense of great loss and in a mood of doubt and uncertainty. It is possible that the Republican primaries may not be very influential in the finding of a candidate next year, and that the convention itself will select the ticket from a number of names to be presented as "favorite sons." Thus Ohio will probably name Senator Harding; Illinois is likely to rally around Governor Lowden; Pennsylvania may send a delegation for Senator Knox; New York may again favor Judge Hughes; there may be a large call for ex-President Taft on the part of his hosts of admiring friends; California may bring forward the name of Senator Hiram Johnson; Washington may wish to present Senator Poindexter; strength from other parts of the country besides his own mountain State may manifest itself for Senator Borah; the American passion for military heroes may bring General Pershing or General Leonard Wood into the foreground as candidates; and so the list might be considerably extended, for there are other men, such as ex-Governor Whitman, and Senator Weeks of Massachusetts, whose friends still have them in mind. Issues between the two parties are not as yet very clearly defined. Business and labor questions are likely to be foremost. Railroads, shipping, control of the wire services—these words suggest some of the great topics that will figure in the next campaign. The transition from war to peace brings many problems.

Congress Passes the Revenue Bill On February 13 the new revenue bill, as amended first by the Senate and then by the conferees, passed the Congress by an almost unanimous vote. The measure is designed to raise through taxation a greater sum of money than has ever been demanded before in any country. The exact estimate is $6,070,000,-000 for 1918 and $4,000,000,000 for 1919. The long consideration of the bill by the Senate Finance Committee led to its improvement in many respects in the direction of clarity and equity. Most of these improvements were retained in the final bill as reported by the conference of Senate and House. The conferees from the Senate gave way to Mr. Kitchin and his associates in the matter of higher rates on corporation incomes for the so-called "excess profit" tax. The amendment inserted by the Senate, repealing the unpopular zone system of second class postage rates, was also relinquished before the insistent demands of the House conferees. The major portion of the great sum the bill is designed to raise comes from very heavy taxation of large incomes of individuals and corporations. It is true, however, that while the new law grasps eagerly for the millions of dollars, it does not neglect the pennies. A person able to pay ten cents for a glass of soda water must pay one cent additional under this measure. The bill makes a most voluminous document. It would require nearly the whole of this magazine to print it in full.

New Individual Income Tax Rates While it is true that the bulk of the money to be raised under the new law comes from large incomes and profits, it is also true that the rate of increase in taxation for 1918 over previous years is much higher for the smallest taxable incomes than for the greater ones. This was inevitable because by 1917 the rates of taxation on the larger incomes had already

reached a height which prevented doubling or trebling them without asking for more than the whole. To show how the present bill has increased the tax burden of people with smaller incomes: A single man, who last year paid a tax of $40 on an income of $3000, will this year face a tax of $120, being 6 per cent. of his net income in excess of $1000, which is exempted. This great difference results from the radical increase of the normal tax over previous years. In 1917 the normal tax was 2 per cent. on an income over $4000 and 2 per cent. additional on an income above $20,000, the surtax beginning at $5000. For 1918 the normal tax has been increased to 6 per cent. on incomes up to $4000 and to 12 per cent. on incomes in excess of that figure.

The Income Surtaxes

Under the new measure surtaxes begin on incomes above $5000 and are graduated by zones of $2000 each of income up to the final surtax of 65 per cent. on that part of an income in excess of one million dollars. Thus, for 1918 a man with a net income of $50,000 must pay a normal tax of $5520 and a surtax of $5510, a total of $11,030. In the first three years of the operation of the income tax law (1913, 1914 and 1915), such a married person with $50,000 income paid only $760, less than one-fifteenth of the sum he must contribute to the Government under the present bill. In 1916 his tax bill was $1320 and in 1917 it was $5180. Thus, the moderately rich family in the United States will be asked to give up from a fifth to a fourth of their year's income. With the very wealthy the proportion is much greater—an income of one million dollars must pay $694,030 taxes, or nearly 70 per cent.

Corporation Taxes

Corporations, too, must pay a normal tax of 12 per cent. for the year 1918 on the amount of net income in excess of the credits allowed. In addition they must pay excess profits and war profits if there are any. If a corporation has earned for 1918 only 10 per cent. on its invested capital, or less, it has only the normal tax to pay. If it has earned more than 10 per cent. but less than 20 per cent., it pays 30 per cent. tax on the amount over the exempted 10 per cent. If it has earned more than 20 per cent., it pays 65 per cent. tax on the excess income. Then if the net income for 1918 exceeds the average earnings of the corporation for the "pre-war" years 1911, 1912 and 1913 by a sum larger than the total of excess profits taxes just described, an additional and final war profits tax of 80 per cent. is levied on the excess sum.

Lower Figures for 1919

The present bill provides for the federal taxes of 1919 as well as the previous year. For 1919 a sum of four billion dollars is aimed at as the total of taxes. The chief difference in the schedules of the two years effecting a reduction for 1919 comes in the rates on corporation incomes. For 1919 the 12 per cent. normal tax on corporation incomes will be reduced to 10 per cent. The 1918 excess profits taxes of 30 per cent. on net incomes between 10 and 20 per cent. of invested capital will be reduced to a tax of 20 per cent., and the 65 per cent. on income exceeding 20 per cent. of invested capital will be reduced to 40 per cent. The war profits lash of the whip will be confined, for 1919, to such portions of the corporation's income as have resulted from Government contracts.

The Coming Bond Issue

On February 10, Secretary of the Treasury Glass asked Congress for sweeping powers in his management of the coming issue of "Victory" bonds. Secretary Glass requests virtually unlimited authority to fix the interest rate and other terms, and also an increase of the amount of the issue that he may at his discretion offer to the public, from the five billion dollars already authorized to ten billion. His letter to Chairman Kitchin of the House Ways and Means Committee also asks permission to issue Treasury notes maturing within five years up to an amount of ten billion dollars. This new legislation which the Secretary seeks would give him entire authority to determine the tax exemption features of the new loan, and also to enlarge the tax exemption privileges of existing Liberty bonds. Secretary Glass explained his request for such unusual powers by calling attention to the rapid current changes in the country's commercial and industrial readjustment which make it impossible for him to decide wisely and finally the proper terms of a loan to be floated nearly two months after Congress will have adjourned. The Secretary said bluntly and truly that the new loan cannot be issued successfully, now that the war is over, within the limitations imposed by existing laws.

The Railway Problem Pressing

The necessity of deciding promptly on some constructive plan for the future of our railroads has been emphasized by the results recently published of the first year of Government control and operation. In spite of Mr. McAdoo's increase of passenger rates by no less than 50 per cent. and his horizontal increase of freight rates by about 25 per cent., the Railroad Administration closed the year 1918 with a net deficit of two hundred million dollars, after allowing for the guaranteed "standard return" aggregating nine hundred and fifty million dollars paid, or to be paid, to the owners for the use of the properties. The increase in rates put into effect by Mr. McAdoo yielded about six hundred million dollars in earnings, although they were in effect only during the last half of the year. The most important factor in producing the deficit that resulted even after this large increase in rates, was the raising of wages, by the Railroad Wage Commission, of which Secretary of the Interior Franklin K. Lane was chairman, and, later in the year, by two other boards composed of railway officers and employees. The first commission provided advances of wages aggregating three hundred million dollars a year. The later advances aggregated five hundred million dollars a year. But the end is not yet. Director-General Hines is now confronted with further demands from the men in train service for wage increases that are estimated to total at least one hundred million dollars a year. At the same time there are many calls from shippers for a reduction of the higher rates instituted by Mr. McAdoo. There has been a marked increase of unionism among railroad employees since the Government took charge of the roads. When they were taken over, the Director-General prevented any interference with efforts of employees towards further organization, and today there is a strong possibility of a single railway union representing the entire body of two million employees.

New Plans for Railroads

During the past month the Senate Committee on Interstate Commerce has continued assiduously to obtain the views of those who have special knowledge of the railway problem or who are importantly interested in it. Prominent among the plans suggested in the hearings of the Committee during the month were those of Director-General Hines, those of the representatives of the railroad brotherhoods and those of spokesmen for the holders of railroad securities. Mr. Hines' recommendations were given with clearness and force. He opposes Government ownership and made an able plea for Mr. McAdoo's plan for an extension of Government control until 1924—a plan which, in spite of his strong advocacy, does not seem to be gaining favor. Mr. Hines wants a radically reconstructed private ownership with such close Government supervision, including Government representation on the Boards of Directors, as would virtually give the public and labor the benefits of public ownership, while preserving the incentive of self-interest and avoiding political difficulties. The counsel for the railroad employees' brotherhoods favored the purchase of the railroads outright by the Government and turning them over to a single operating corporation, two-thirds of the directors to be elected by the employees and the other third appointed by the President of the United States, with earnings of the corporation divided from time to time among the employees. Mr. S. D. Warfield, head of an association of owners of railroad securities, recommended a plan of private ownership with the Government guaranteeing a fixed return of 6 per cent. on capital invested, and providing that one-third of all profits beyond that should be distributed among the employees. Another third would be used for improvements and the final third would be returned to the roads as a reward for efficiency.

The Cost of Guaranteeing Wheat Prices

The House Committee on Agriculture has prepared the measure which will enable the Government to make good its guarantee of a price of $2.26 per bushel for the wheat crops of 1918 and 1919. It is a costly proceeding. A "revolving fund" of one billion dollars is to be appropriated for the President's use in filling the gap between the guaranteed price of wheat and the price which the grain will normally command under the conditions of supply and demand in the post-war period. Already the release of shipping made possible by the cessation of war has brought Australia's surplus into the world's markets. It is estimated that there are 200,000,000 bushels of Australian wheat for export, controlled by the British Government at a price of $1.05 per bushel at the port of export. In a single week of January fifty-five vessels started for Australia to bring food stuffs, to England, India, and other countries.

© Committee on Public Information

SOME OF THE 5,000 MOTOR TRUCKS SURRENDERED BY GERMANY, UNDER THE TERMS OF THE ARMISTICE
(American guards, as well as the German drivers, may be seen in the picture)

RECORD OF CURRENT EVENTS

(From January 17 to February 14, 1919)

THE PEACE CONFERENCE AT PARIS

January 18.—The peace congress (without delegates from the defeated powers and Russia) meets at Paris in the Ministry of Foreign Affairs; President Poincaré delivers an address of welcome; President Wilson proposes Premier Clemenceau as permanent chairman, and the delegates unanimously elect him.

January 19.—Regulations are adopted for governing the sessions of the conference; the five belligerent powers (United States, British Empire, France, Italy, and Japan) are to take part in all meetings and commissions; other belligerent and associated powers are to take part only in sittings at which questions concerning them are discussed; neutrals may be invited to appear when their interests are directly affected.

January 22.—The Supreme Council of the Peace Conference announces that a proposal of President Wilson has been approved, inviting every organized group in Russia to send representatives to Princes' Islands, Sea of Marmora, to confer with representatives of the associated powers with a view to establishing order; meanwhile aggressive military actions must cease.

January 23.—The Chinese agency at Washington states that the Peace Conference will be asked to revise the China-Japanese treaties of 1915, as inconsistent with the free development of China.

January 24.—A "solemn warning" is issued against the use of armed force in many parts of Europe and the East to gain possession of territory in support of claims before the Conference.

January 25.—A full session of the conference declares for the creation of a League of Nations, "to promote international obligations and provide safeguards against war"; there are to be periodical conferences and a permanent organization; membership should be open to "every civilized nation which can be relied upon to promote its objects"; a committee is appointed to work out the details.

January 26.—Premier Clemenceau, as chairman, appoints committees on Responsibility for the War; Reparation; International Labor Legislation; and Regulation of Ports, Waterways, and Railroads.

January 30.—A committee investigating the frontier controversy between Poles and Czechoslovaks, over the Teschen coal fields, obtains a cessation of hostilities, with the temporary occupation of the disputed zone by the Allies.

"Satisfactory provisional arrangements" are reached for dealing with the German colonies and the occupied territory in Asiatic Turkey—according to an official statement.

February 3.—The League of Nations Commission, with President Wilson presiding, holds its first meeting in Colonel House's apartments.

February 11.—The principal French member of the Commission on a Society of Nations, Leon Bourgeois, proposes the creation of an international military body to enforce decisions.

The Jugoslav delegates request President Wilson to act as arbitrator in the dispute with Italy regarding the eastern coast of the Adriatic.

The Japanese delegation is reported as insist-

ing upon Japan's retention of the Marshall and Caroline Islands, taken from Germany.

February 14.—The draft of a constitution for the League of Nations is read and explained to the Conference by President Wilson, as chairman of the commission which formulated it; the plan provides for an international secretariat and an executive council consisting of representatives of nine states; decisions rendered will be enforced, if necessary, by "the prevention of all financial, commercial, or personal intercourse" between the covenant-breaking state and any other.

PRESIDENT WILSON IN EUROPE

January 18.—As one of five delegates from the United States, the President begins regular attendance at the sessions of the Peace Conference.

January 20.—At a luncheon tendered by the French Senate, the President pays a tribute to French character in the face of national danger.

January 25.—Discussion of a League of Nations, in the Peace Conference, is opened by President Wilson; he declares such a league necessary both to make present settlements and to maintain the future peace of the world.

January 26.—The President visits Rheims and the battle area around Chateau-Thierry.

February 3.—Addressing the members of the French Chamber of Deputies, the President dwells upon America's long standing "comradeship" with France; the old menace to the eastward will be eliminated by the proposed Society of Nations, rendering it unnecessary in the future to maintain burdensome armaments.

February 11.—President Wilson is formally requested by the Jugoslav delegates to act as arbitrator in the territorial dispute with Italy.

February 14.—President Wilson reads and explains to the Peace Conference the plan for a League of Nations, and later leaves Paris to attend the closing sessions of Congress at Washington.

PROCEEDINGS IN CONGRESS

January 24.—The Senate, after several days of bitter debate, passes a bill appropriating $100,000,000 for relief of famine conditions in Europe—excluding the Central Empires but including the non-Turkish peoples of Asia Minor.

January 28.—In the House, the Immigration Committee reports a bill prohibiting immigration to the United States (with specified minor exceptions) for a period of four years; the Committee on Post Offices votes in favor of returning the telegraph and telephone systems to their owners on December 31, 1919.

January 31.—In the Senate, Republican members denounce the possibility of American participation in control of former German colonies, as reported in unofficial press dispatches from Paris.

The House Committee on Naval Affairs reports the Naval appropriation bill, authorizing $600,000,000 for new construction—providing, however, for cancellation in the event of international limitation of armaments.

February 6.—In the House, the War Revenue bill is submitted, as agreed upon by a conference committee of both branches; the measure is estimated to raise $6,000,000,000 in taxes for the current fiscal year, and $4,000,000,000 annually thereafter.

February 8.—The Senate adopts the Post Office appropriation bill carrying $400,000,000 and authorizing $200,000,000 additional for construction of roads during the next three years.

The House Committee on Agriculture introduces a bill providing $1,000,000,000 to sustain the Government's guarantee to farmers of $2.26 a bushel for wheat, in the face of a much lower price which will obtain in the world's markets. . . . The conference report on the Revenue bill is adopted, 310 votes to 11.

February 10.—In the Senate, a resolution providing for woman suffrage by federal Constitutional amendment fails for the second time by a single vote to obtain the necessary two-thirds; opposition is chiefly among Southern Democrats.

In the House, the Army appropriation bill is reported, carrying $1,117,290,000.

February 11.—The House passes the Naval appropriation bill, accepting the Administration's building program by vote of 194 to 142.

February 13.—The Senate, without roll call, adopts the conference report on the Revenue bill.

February 14.—The Senate, with the Vice-President casting the deciding vote, refuses to consider a resolution of Mr. Johnson (Rep., Cal.), who demands withdrawal of American troops from Russia.

AN AMERICAN CONTRIBUTION TO THE SCIENCE OF WAR

(Mounted on the caterpillar-belt tractor made familiar by the "tank," this heavy field piece moves quickly and surely over obstacles. The scene is at the Aberdeen proving grounds, the gun not having seen actual service)

AMERICAN POLITICS AND GOVERNMENT

January 17.—The legislatures of Minnesota and Wisconsin complete ratification of the prohibition amendment to the federal Constitution.

January 20.—The Interstate Commerce Commission de-

© Committee on Public Information

THE BRITISH COMMANDER OF THE ARCHANGEL EXPEDITION REVIEWS AN AMERICAN CONTINGENT

clares itself in authority to overrule rates established by the Director-General of Railroads.

New telephone rates go into effect throughout the United States, under direction of Postmaster-General Burleson; restraining orders are issued or sought in the courts by public service commissions in a number of States.

January 23.—The New York Assembly ratifies the federal prohibition amendment, 81 votes to 66.

January 24.—Walker D. Hines, the new Director-General of Railroads, asks the Secretary of the Treasury for $750,000,000 with which to finance the railroads to the end of 1919, supplementing the original "revolving fund" of $500,000,000.

The War Department adopts a policy which would enable individual enlisted men to stay in the service until they can secure civil employment.

January 25.—The Chief of Staff of the Army reports that when the war ended on November 11, 1918, the United States had the second largest army on the Western front, 1,950,000 men; France had 2,559,000 and the British (including Portuguese) 1,718,000.

January 27.—The War Department reports that on January 9 there were, in hospitals in France, 33,111 cases of wounds and injuries and 72,642 cases of disease.

January 28.—The Food Administration and the Department of Agriculture submit to Congress a measure appropriating $1,250,000,000 for the purpose of carrying out the Government's guarantee of $2.26 a bushel to wheat producers.

January 29.—The Secretary of State certifies that the prohibition amendment has been ratified by three-fourths of the States and has become a part of the Constitution of the United States, effective January, 1920.

February 3.—Director-General Hines explains to the Senate Committee on Interstate Commerce his proposal to reorganize the railroads into from six to twelve regional operating corporations.

February 4.—The Connecticut Senate rejects the federal prohibition amendment.

February 6.—American casualties in northern Russia to the end of January are officially reported as 409 killed, out of a force slightly in excess of 5000.

February 10.—The Secretary of the Treasury appeals to Congress for legislation modifying present restrictions on the amount and interest rate of forthcoming bond issues.

February 12.—In the three months since the signing of the armistice (according to an official statement issued at Washington), 287,000 American troops overseas embarked for home and 1,130,000 men in home camps were demobilized.

February 14.—The resignation of William G. Sharp, as Ambassador to France, is announced.

FOREIGN POLITICS AND GOVERNMENT

January 16.—Dr. Karl Liebknecht, the Radical Socialist leader (the Spartacus or anti-Government faction), is shot dead while attempting to escape after arrest in Berlin; his companion, Rosa Luxemburg, is killed by a mob.

January 17.—Polish leaders reach an agreement whereby Ignace Jan Paderewski becomes Premier, with General Pilsudski as Foreign Minister; M. Demoski, former Polish leader in the Russian Duma, is to be President.

January 19.—Throughout Germany the people vote for members of a National Assembly, the party of Premier Ebert (Majority Socialists) electing 164 members out of 421, the remainder being divided among five other parties.

The Italian cabinet is reorganized, the King accepting resignations of four members in the absence of Premier Orlando at the Peace Conference.

January 20.—A monarchist revolution breaks out in Portugal, with the avowed object of restoring King Manuel to the throne.

January 21.—The German Government decides that the national convention shall meet at Weimar (on February 6), in order to be removed from the influence of the old Prussian spirit.

The Sinn Fein members elected to the British Parliament meet at Dublin, read a declaration of independence, and proclaim an Irish Republic.

French "effectives" at various periods in the war are officially stated to have been 3,872,000 on August 15, 1914, increasing to approximately five million by February, 1915, and remaining at nearly 5,200,000 from January, 1916, to the end of the war.

January 25.—The Portuguese Government reports numerous successes over insurgent forces in the north and around Lisbon.

February 2.—A monarchist government is constituted at Oporto, Portugal.

February 4.—The newly-elected British Parliament assembles.

February 5.—The British Government invokes the Defense of the Realm Act against electrical workers who threaten to deprive London of light —making such a move a punishable offense.

February 6.—The first German National Assembly is opened in the theater at Weimar; in his address, Chancellor Ebert protests against the "ruthless" armistice conditions enforced by the Allies.

February 8.—Dr. Eduard David is chosen president of the German National Assembly.

February 11.—Premier Lloyd George deals with the labor crisis in an address before the House of Commons; he recites Government efforts to remedy legitimate reasons for unrest, but declares that every power will be used to combat anarchy or Prussianism in the industrial world.

The German National Assembly elects Friedrich Ebert as first President of the German State, after adopting a provisional constitution.

Official statistics show that the civilian population of France decreased 750,000 during the war, besides 1,400,000 deaths among soldiers.

INTERNATIONAL RELATIONS

January 17.—Marshal Foch, in an interview with American newspaper correspondents, declares that "it is on the Rhine that the French must hold the Germans" to avoid future wars; he is understood to imply not annexation of German territory, but rather restriction of German fortifications and army bases.

January 25.—The Allied expedition in the Archangel region of northern Russia (14,000 British, Americans, French, and Russians) is forced to retire by the Bolshevists, operating in large numbers and equipped with artillery.

January 29.—The American Secretary of State, acting in the name of the President (both officials being in Paris), extends formal recognition to the provisional Polish Government.

January 31.—The Allied expedition in Russia is forced to retire further northward, along the Vaga and Dvina rivers.

OTHER OCCURRENCES OF THE MONTH

January 21.—A general strike among dress and waist makers in New York City (mostly young women) involves 35,000 workers, who demand a forty-four hour week and a 15 per cent. advance in wages.

January 27.—Labor unrest throughout Great Britain assumes serious proportions, with strikes in numerous trades brought about by varying causes; it is estimated that 200,000 persons have quit work.

February 1.—Troops arrive in Glasgow, after a day of rioting by shipyard strikers.

February 3.—Transit in London is crippled by a strike of "tube" employees.

February 6.—A general strike in Seattle, growing out of disaffection among shipyard workers, causes practical cessation of industry; soldiers from Camp Lewis operate the municipal lighting systems.

February 8.—Unemployment throughout the United States, according to official announcement of the Department of Labor, has increased to 290,000 from 12,000 on December 3.

Mines in the Butte (Montana) district are closed by a strike called by the Industrial Workers of the World.

February 9.—Memorial services for Theodore Roosevelt are held throughout the United States, in London and Paris, and among American troops in France and Germany.

February 10.—The general strike in Seattle is ended, principally through firm measures taken by the Mayor, Ole Hanson.

OBITUARY

January 18.—Prince John, youngest son of King George of England, 13.

January 21.—Yi Hiung, who abdicated the throne of Korea in 1907, 68.

January 22.— George T. Oliver, of Pennsylvania, who acquired successive prominence as lawyer, steel manufacturer, newspaper publisher, and United States Senator (1909-'17), 71.

January 27.—Rear-Adm. French E. Chadwick, a distinguished naval veteran of the Civil and Spanish Wars, 75. . . . Ismail Kemal Bey, head of the provisional government of Albania, 1912-'14, 76.

January 29.—Bishop Arthur L. Williams, of the Episcopal diocese of Nebraska, 63. . . . Harrison E. Gawtry, for many years president of the Consolidated Gas Company of New York, 78.

January 30.—Major-Gen. Sir Samuel Steele, of the Canadian Army, 70. . . . Ermete Novella, a famous Italian actor, 68.

January 31.—Nathaniel C. Goodwin, the famous American comedian, 61.

February 1.—Brig.-Gen. John Moulden Wilson, U. S. A., retired, 81.

February 3.—Prof. Edward Charles Pickering, director of the Harvard Observatory, 72. . . . Xavier Leroux, the French composer of operas, 55. . . . Maria Theresa, recently Queen of Bavaria, 70.

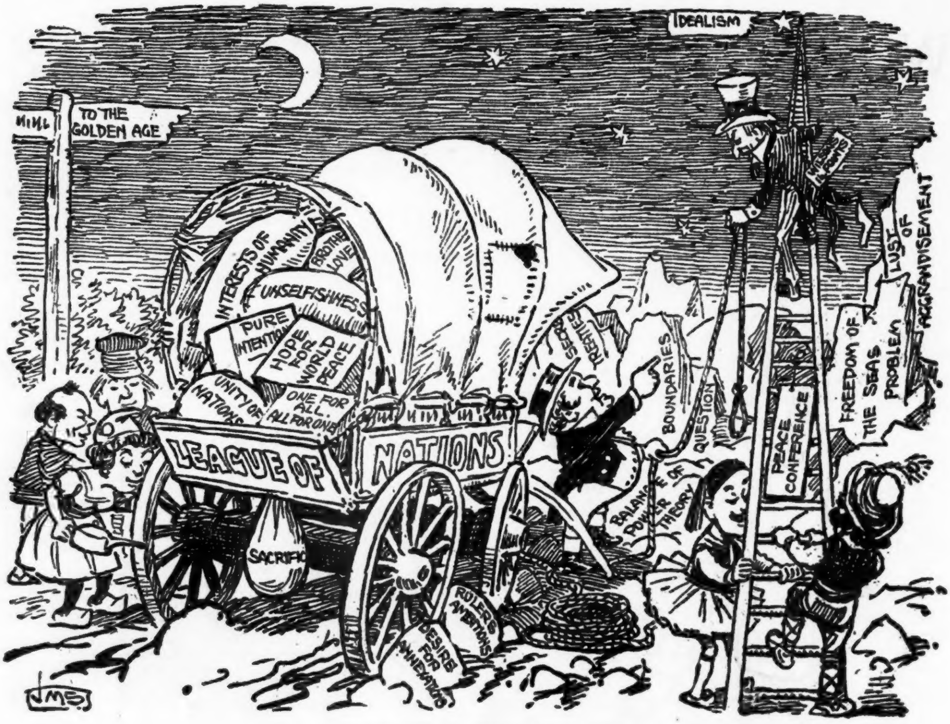
February 11.—Read-Adm. John Hood, U. S. N., retired, 59.

WORLD HISTORY IN CARTOONS

THE MODERN MOSES—BUT WILL HIS COMMANDMENTS BECOME LAW?
From *Nebelspalter* (Zurich, Switzerland)

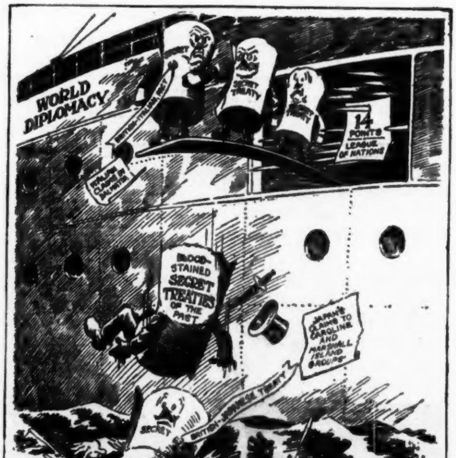
"VOILA, MONSIEUR LE PRESIDENT!"
From the *World* (New York)

THE ARCHITECTS HAVE IT ALL WORKED OUT
From the *Journal* (Sioux City, Iowa)



HITCHING THEIR WAGON TO A STAR
From *News of the World* (London)

PLASTERED!
From the *News* (Dayton, Ohio)



SPLASH! AND GOODBYE TO SECRET TREATIES
From the *News* (Dayton, Ohio)

IN FOR A TRIMMING
From the *Evening Telegram* (New York)

A FIGHT FOR LIFE
From *News of the World* (London)

ENVOYS EXTRAORDINARY
From the *Herald* (New York)

THE BOLSHEVIK COMES DOWN FROM HIS HIGH HORSE
From the *World* (New York)

A DANGEROUS DERELICT
From the *Eagle* (Brooklyn, N. Y.)

RUSSIA LISTENS FOR THE VOICE OF PRESIDENT WILSON
From the *Star* (St. Louis, Mo.)

"THE WATCH ON THE RHINE"
From *Amsterdammer* (Amsterdam, Holland)

THE NEW PADEREWSKI MINUET
From the *Republic* (St. Louis, Mo.)

INTERNATIONAL affairs still keep the cartoonists, like the editors, very busy. On the three preceding pages President Wilson, the League of Nations, and Russian Bolshevism are featured. On this page the Allied Watch on the Rhine, Paderewski's leadership in Poland, and the I. W W. claim attention.

The opposite page carries a group of cartoons picturing such domestic topics as the attitude of Congress towards President Wilson, the proposition to provide land for soldiers, the railroad problem, prohibition, and our old friend the H. C. of L.

"ON THE SIDE OF THE ANGELS"
MR. LLOYD GEORGE: "But, my dear, we must be charitable. I believe I can see little wings sprouting already!"
From the *Passing Show* (London)

GIT!
From the *World* (New York)

© George Matthew Adams

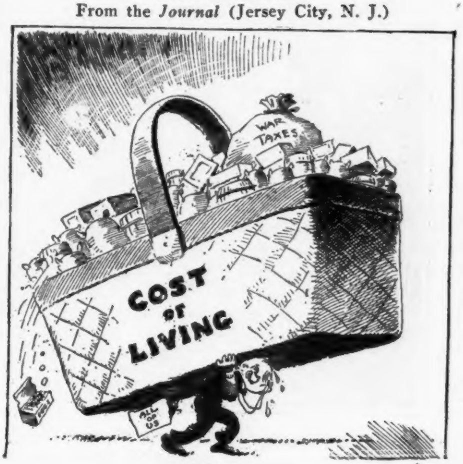
HERE COMES TEACHER!
From the *Citizen* (Brooklyn, N. Y.)

LAND FOR SOLDIERS
From the *News* (Dallas, Texas)

Many cartoons have to do with Uncle Sam's railroad predicament. Our selection this month is from the Baltimore *American*. It pictures the national uncertainty, dismay, and wonder. Nobody seems prepared to tell Uncle Sam where to get off.

"HOW DRY I AM!"
From the *Journal* (Jersey City, N. J.)

WILL SOMEONE TELL HIM WHERE HE GETS OFF?
From the *American* (Baltimore, Md.)



CARRYING ON
From the *American* (New York)

THE NAVY'S NEW TASK

BY HON. JOSEPHUS DANIELS

(Secretary of the Navy)

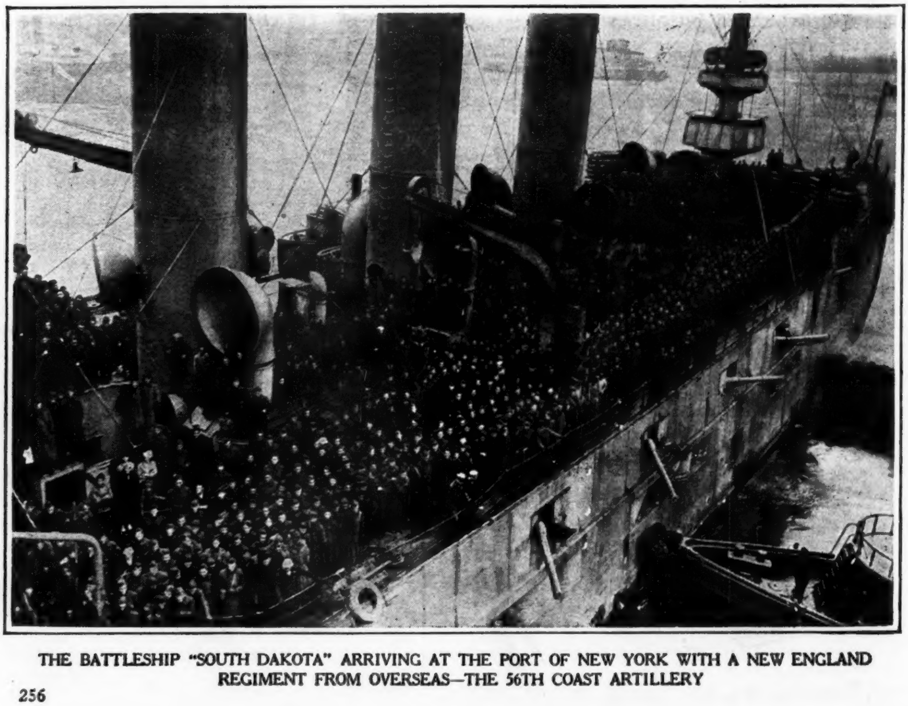
I confess to a feeling of gratification that the first Marines brought back from France—those "Devil Dogs," as the Prussians called them—came in the transport "North Carolina," the first ship in the war to be fitted as an aviation ship.

Nothing was further from the thought of the constructors who designed the ships of the American Navy, than that they would be converted into transports for the carrying of troops. Since the beginning of this war, there has not been any service the country wishes rendered that the Navy has not been ready to render, even along lines not regarded as coming within the province of the naval service.

When the war terminated so suddenly, the first call was for ships to bring back our soldiers, as during the war the demand had been insistent for ships to take the soldiers across. We immediately began to get ready all the ships that could be utilized for this purpose, and already we are bringing back 20,000 a month in naval vessels.

We have been most happy to receive letters from officers and men of the Army, voicing their appreciation of the comforts and consideration shown them on these ships. We shall continue to use naval vessels as long as they will be needed to aid in bringing the soldiers home as fast as they can be demobilized.

My only regret is that we have not enough ships to bring them more rapidly.



THE BATTLESHIP "SOUTH DAKOTA" ARRIVING AT THE PORT OF NEW YORK WITH A NEW ENGLAND REGIMENT FROM OVERSEAS—THE 56TH COAST ARTILLERY

BACK FROM THE WAR ON A BATTLESHIP

AN OFFICER'S TRIBUTE TO THE NAVY'S NEW SERVICE

[An officer who returned to the United States last month after a period of service with the American Expeditionary Forces happened to come back on a warship. His experiences are set forth in a letter to the editor of this REVIEW, and he bears pleasant testimony to the manner in which the navy is performing its new task, as described by Secretary Daniels on the preceding page.—THE EDITOR.]

IF your soldier relative or friend has not already returned from overseas, do by all means hope that he may get transportation on board a United States battleship. At the moment of putting these observations on paper, thirty-seven army officers, including myself, and 917 enlisted men are living a most luxurious and comfortable life on the high seas on board the U. S. S. ————. Our ship was once a noted member of the American fleet that made its voyage around the world.

In order to provide accommodations for transporting soldiers, the ship's personnel has been reduced from 65 officers to 24, and from 1,185 men in the crew to 600.

Practically all of the army officers on board have separate staterooms—small, but well equipped, well ventilated, and extremely comfortable. The ship's crew have made certain readjustments in their sleeping arrangements in order to make it just as comfortable as possible for the soldiers. Some of the soldiers sleep in cots and others in the regulation sailor's hammock. The first night out the soldiers were falling to the ground like autumn leaves, but they did not take long to learn the right way to turn over.

There is practically no sickness on board, although I cannot imagine a safer place to be sick. There is a well-equipped dispensary, an operating room, and a hospital ward, with a surgeon and medical attendants.

As for food, it is the most delicious that I have ever eaten, and we have never had the same thing twice. While dinner is being served, the ship's orchestra plays a variety of excellent selections, and every evening there are "movies." One warm evening the moving pictures were shown out of doors, on the upper deck, under a beautiful starlit sky.

The ship's captain insists that everyone shall spend as much time in the air as possible, with a certain amount of exercise daily. There are deck sports—such as boxing, medicine ball, and quoits. "Abandon ship" drills are held frequently and at unusual times.

The captain had issued the following orders to his men:

> While engaged in transporting troops, it is the desire of the Commanding Officer that the greatest cordiality shall exist between the ship's crew and the army. This spirit must be cultivated and practised by every officer and man on board.
>
> Our men must understand that the troops have had hard service for some time; also that living conditions on board ship are entirely different from what they have been accustomed to and that everything will be new and strange.
>
> In order, therefore, that the troops may be as comfortable as possible and that they may leave the —— with pleasant recollections of the ship, in particular, and of the Navy, in general, from their personal contact with our branch of the service, every effort must be made by all on board to make their stay with us pleasant.

The men of the ship's crew, not to be outdone by their commanding officer, printed and circulated this greeting to their soldier passengers:

> We of the Navy deem it a great privilege to carry home, men who have stood the test at the front. All honor to you, men of July 18th and 19th and other historic days. You are now in the U. S. A., at least this is your country—U. S. S. ——. We wish to make your last experience in the service happy; to connect France and America with a fortnight of comradeship, sports, and pleasant memories. God speed to you all. Our Country needs every man of us, to carry our spirit of good fellowship and sacrifice into the heart of American thought and idealism. Let us make reconstruction, real construction.

AMERICA AND THE ALLIES AT THE PEACE TABLE

BY FRANK H. SIMONDS

[It is now four and a half years since Mr. Simonds began to write for each issue of this magazine his articles upon the World War and its cognate problems of international politics. He made two rapid visits to the war fronts during the conflict, one early in 1916, and the second some two years ago. He has now been in France for several weeks after a few days in London, and he is to continue, month by month, to discuss for our readers the international situation as it develops. He is also busily studying the later battles in order to complete his "History of the World War," three volumes of which the Review of Reviews Company has issued, while two are yet to be written. As he sailed in January, there came the agreeable announcement that he had been decorated by the French Government as a Chevalier of the Legion of Honor. At the end of this article, we publish Mr. Simonds' cable describing the Peace Conference situation at the date of President Wilson's departure from Paris.—The Editor.]

I. President Wilson's Presence

IN the present article there are three specific questions which I desire to discuss, reserving until the April article a more general discussion of the Peace Conference. But before entering into an examination of these three matters I desire to warn my readers against placing too great credence in any rumors of rivalries, jealousies or bitternesses between the great powers which might threaten to break up the Conference or create permanent bad feeling. In my judgment all the evidence here points towards substantial and growing harmony. Divergent views are expressed not alone by the representatives of some of the nations, but by various representatives of each nation, but this is a gain and not a loss, since it leads to frank discussion.

Nothing seems clearer than that all nations here represented are determined that peace shall be made at Paris, that a just and durable peace shall be made; and there is every reason to believe that the more extreme of nationalistic aspirations and frontier claims of various nations, like the economic and industrial ambitions of others, will be properly curbed in the interests of world harmony.

From time to time rumors of every sort originate, reports of international disagreement and threats of ultimatums, but upon the slightest examination they disappear. A world Peace Conference is a huge and unwieldy party. Americans will find a good parallel for it in their own national political convention. The same difficulties of organization and of agreement are here, but just as the National Convention must in the nature of things nominate a ticket and adopt a platform, and to win the election must choose a good candidate and frame a strong platform, so the representatives of the world at Paris are laboring under the ever-present necessity of making peace and making a just peace to escape the unfavorable judgment of their fellow-countrymen.

The first aspect which I desire to discuss is that of the President's presence in Europe, its meaning and its importance. Before I came to Europe I was one of those who doubted the wisdom of the adventure and saw in it great possibilities for harm and no real compensating benefits. This was the American point of view, and it was matched among the official and diplomatic people in Europe by an apprehension that if the President should come he would come as a dictator rather than as a conferee, and that he would demand the surrender by the nations associated with the United States of things which it would be impossible for them to surrender.

As it turned out both of these views seem to have been wrong. In the first place, the President's coming had an instant and an enormous appeal, not to governments or official worlds, but to great masses of the people in all the countries which Mr. Wilson visited. The testimony from London, from Paris, from Rome, is the same. In each case although everything which could be done by the official world to make the visit a success

was done, in all instances the peoples of the various capitals themselves went out and welcomed the President in a fashion unknown in European history.

In a rather inexplicable way the President of the United States became for the peoples of the countries which had fought the war and made the great sacrifice the symbol, a guarantee that the settlement of this supreme tragedy would be of a new sort. Mr. Wilson was almost a mystical figure for the masses of these people. They expected of him a miracle; they expected of him a League of Nations which would make a war impossible in the future while curing all the evils of this latest war.

For them he was a physical expression of a boundless hope, and in the first weeks of his visit the President did nothing which did not strengthen rather than weaken this universal impressive popular expectation. He was accepted as a saviour of society; his position was exceedingly difficult and dangerous, but in the midst of the difficulties and dangers he avoided mistakes.

Now the permanent gain as contrasted with the temporary expectation seems to me twofold. In the first place, the President, by his presence, loosed great waves of idealism and of aspiration. I do not pretend to say that any man coming as the President of the United States in the present circumstances might not have done the same thing, but what I am trying to explain is that the President of the United States, coming at this time, and in this way, has created conditions atmospheric and spiritual which are bound to be registered in the final peace terms.

In the second place, in England particularly the President gave a new direction and a new vitality to Anglo-American relations. I do not mean official or diplomatic relations, but I mean friendly relations between the two peoples. Mr. Wilson seemed to millions of English men and women to represent a principle which they believed in and desired to serve. His presence seemed the assurance that masses and millions of American people were animated by precisely the same principles and shared the same aspirations. This consciousness and belief in a common purpose and a common belief in the present and in the future seemed in England to give a promise of a durable basis of friendly relations. I talked to many scores of Englishmen, with not a few Americans in London. The testimony was the same. It was that the President's visit had opened a new period in Anglo-American relations, that as a result misunderstanding would be avoided and the barriers between the two countries would be abolished. It is difficult to analyze the emotion and the conviction, but it is equally impossible to exaggerate it.

Viewed close to the event and with all proper qualifications necessary in the premises, the great thing, the very greatest thing, about President Wilson's visit was that it created the belief that there could be present and future coöperation between the United States and Great Britain, because there was a solid basis for such coöperation. Millions of men and women found in the presence and in the words of Mr. Wilson evidence of a contemporary community of thought, of aspirations and of ideals. I came to London wholly skeptical of the Wilson visit. I found unanimous testimony to its success, including that of the Americans in London who would naturally be least reserved in criticizing an American to an American.

It is patent that no man—since all men are human—could achieve the results expected of Mr. Wilson, and yet I am satisfied that the results of his visits to England, to France, and also to Italy, where perhaps the popular demonstration was the greatest of all, will be beneficial immediately and for the long future. I am satisfied that the peace that is made at Paris will be more satisfactory to the world because Mr. Wilson's visit and the kind of appeal which his presence made generated forces which will operate upon the delegates at the Peace Conference and which will directly influence and shape their decisions in the direction of justice and liberalism.

I do not think that Mr. Wilson has been over successful in the mere mechanics of the Conference. I do not think that he has shown himself particularly happy in the selection of his agents or inspired in many of his dealings with various nations. There are limitations and obvious limitations to any man and Mr. Wilson's limitations are as patent in Paris as they are unmistakable in Washington. The thing that I am trying to say is that Mr. Wilson's visit had an impersonal or non-personal aspect; that it had an effect that neither he nor anyone else could perhaps have calculated and that effect was good and convinced me as it convinced most of the Americans in Europe who like me were opposed to his going that his journey was thoroughly justified by the event.

II. The English Program

The second point which I wish to examine at this time is the purpose of Great Britain as it is expressed at this Conference, recognizing that in the larger way the Peace Treaty will be framed by America, France and Great Britain. What then is the main purpose of the British Empire as it is revealed at Paris?

The answer seems to me very clear. The British delegates have come to Paris resolved that no matter what else is decided here that as a consequence of mutual coöperation and association Anglo-American relations will be better and more intimate in the future. To this end I am convinced the British are willing to make any reasonable and almost any unreasonable concession.

The burden of British comment here as in England seems to be this. Through the President and elsewhere America has expressed certain ideals, has voiced her belief in certain duties which must be undertaken by all the great Powers of the world if we are to avoid another general war. Since America is sincere in advocating these principles America is necessarily ready to share in the obligations. This point is vital.

Now nothing is more surprising to the Americans in London or in Paris than the calm fashion in which the British assign to America specific duties, specific obligations. It is for America in their mind to grasp each of the thorny problems which European rivalries and complications make impossible for any European nation. For example, there is Constantinople. The English would not consent to the occupation of Constantinople by the French nor the French to a British occupation. The French and the British are agreed that Italy should not occupy Constantinople, but since someone must occupy Constantinople it is the belief of the English that it should be the United States, not as a matter of territorial or economic aggrandizement but as a moral obligation.

And Constantinople does not mean merely the shores of the Straits and the Sea of Marmora. It means really attacking the Turkish problem from both ends. It means dealing with the Armenian question, perhaps the Syrian question. Quite in the same way there are the German Colonies in Africa. Someone must take them. The English are unwilling that the Germans should sit down again on the road to India. The South Africans are determined that Germany shall not have German Southwest Africa a base for any propaganda among the Boers leading to another revolution. Why not have America administer them?

Now the thing would seem absurd to the mass of my American readers but I hasten to assure them that it does not seem in the least absurd to the English mind. To English policy and English purpose the Peace Conference is to persuade America if possible to undertake the solution of many of the most complex problems of the whole world. This purpose is defended by quotations from President Wilson's various speeches, by quotations from various American statesmen and thinkers and by the frank assertion that no country save America possesses the resources commensurate with the task or is free from those limitations mutual jealousies imposed upon European powers.

I think it is of the utmost importance that America should understand how real and general is the British belief that the time has come when the United States must accept a portion of the responsibilities incident to her great strength as disclosed in the war. It is the view of the British in large numbers that America should become in a certain sense the agent of the League of Nations in many of the lost regions of the earth, not to raise the American flag, not to become a competitor in a new imperialism but to undertake a task of civilization and liberation so colossal as to demand American resources to the utmost.

Now with this fact in mind it is not difficult to see the British representatives at work in Paris. They are ready to coöperate with Mr. Wilson and the Americans in practically every question that comes up. Precisely in the same way and in the little differences of opinion in the world of journalism British journalists at Paris stand shoulder to shoulder with Americans. I can conceive of no policy uttered, no purpose declared by Americans at Paris which would lead the British to separate themselves from us, however considerable the cost to them. In any event this is the spirit of Britain in Paris.

I do not find anywhere any British appetite for territory. Rather I find the British reluctantly compelled to champion certain demands made by their Colonies—notably Australia and South Africa—with respect to the German Colonies, but doing it without enthusiasm or great conviction. I do not find the British eager to extend their

frontiers or add to their Empire but rather apprehensive of the greatness of the burden already laid upon their shoulders.

And this leads me to another observation. It is impossible to mistake the effect of the war upon the English people. It has had a chastening and a saddening effect. The last year of the war, with its defeats and its disasters, which in the end involved the physical interposition of America to save the day, has changed the whole outlook of many English upon the world and upon the Empire. The shock of the events of last spring is still easily to be detected and there is a frank and not unmoving confession to be had from Englishmen that the events of the war have changed the whole world and the position of England in that world.

And in this situation England's policy is not to be mistaken. There is a resolution undisguised and inescapable to preserve and to expand the sympathies and the coöperation which had their origin in a community of action against the common enemy. I do not believe that Lloyd George with his recently won election and his enormous majority could endure a direct disagreement with Mr. Wilson or the American Government, and I am satisfied that the British Government, like the British people, are resolved that there shall be no such disagreement.

So much for the British policy at Paris which I think is easy to understand when thus translated.

III. French Purpose

As contrasted with British purpose at Paris, French policy must deal with many points, all dangerous. These grow without exception out of the peculiar situation of France. She alone of the great Western nations has been invaded. This war has been fought upon her soil for the purpose of destroying her as a world influence and of making her a German vassal. In victory the German destroyed such of French cities and wealth as he did not mean to annex or could not remove. In defeat he completed the destruction and turned all of industrial Northern France into a waste. I do not know words that could describe the Flanders and Artois regions as I saw them them a few weeks ago, when through the courtesy of the British Government I had a chance to journey through Lens and over what was once the Hindenburg Line.

Therefore the first thought and the first concern in the French mind is that France shall be guaranteed so far as is humanly possible against a return of the destruction from the North. Above all else, if the League of Nations shall fail, if the hope that Germany will transform itself proves idle, that the next war shall begin on German and not on French soil.

Four times in a hundred years the Germans have come down from the North into France, each time bringing destruction and three times carrying away a portion of French territory. In this last invasion their object was greater than ever before and they had marked out for annexation the fairest of French industrial regions.

Therefore with recent history and smoking ruins in full view France comes to the Conference at Paris asking first guarantees against any new German aggression. Viewed with reference to her recent agony this French demand seems reasonable, and yet to many Americans unfamiliar with the facts they have already taken upon the appearance of chauvinistic demands. They had already become evidence of a revival of French imperialism. And yet upon examination I can find no warrant for such comments.

What the French ask in substance is this: the return of Alsace-Lorraine, which requires no comment since it is a settled thing; the return also of the Saar coal districts, France's before 1815, not merely because of an ancient claim, but because the Germans have deliberately and wantonly destroyed the Lens coal district of the North for the precise purpose of making France dependent upon German coal.

And if this last wrong be not righted Germany will have lost the war politically but in this respect have won it economically.

In addition they will ask, I am sure, that the Germans be prevented by adequate guarantees from maintaining armies or fortresses or any military establishments on the left bank of the Rhine in that territory north of the new French frontier which will be that substantially of France before the French Revolution. This last demand means that the next time Germany undertakes to assail France, if she shall, the war will begin, not in the heart of Northern France, but on German territory, and it will begin between the Saar and the Rhine, and not between the Meuse and the Marne. France asks the world, which tardily discovered that the French frontier was the frontier of civiliza-

tion, that for the future this frontier shall be made safe against new inroads.

Argument for the Saar coal district is not based merely or mainly upon ancient title. Last year, when the Germans found they were not going to be able permanently to hold the French coal district of Lens, they systematically and completely wrecked mines and machinery, they dynamited houses, and they transformed the whole district into an almost hopeless desert. Their purpose was to make France dependent upon Germany for coal, to cripple French industry to the profit of Germany; and if the treaty of Paris fails to award France compensation in the shape of coal, the German object will have been achieved.

France asks, therefore, the frontiers of 1814, rather than those of 1870, as an act of justice, both because of ancient stealing and of contemporary destruction, and, so far as I know there is no criticism of her purpose among the British or among Americans in France.

So much for the European phase of the French purpose. I repeat that they do not think of imperialistic purposes. They are anxious to prevent a repetition of the past. It is very hard to give to Americans who have lived in peace and with no accurate picture of devastated France, real understanding of French emotion at the present time. France has just escaped a terrible disaster, which would have meant approximate national destruction. For nearly half a century the French people have existed under the shadow of German threat.

It still seems only yesterday that German shells were falling in Paris and the sky was lighted at night with the flame of German guns. It is only a few months since the arrival of German troops in Paris was believed inevitable. The greatest apprehension is over, but not easily do men and women forget perils so recent, which are again only repetitions of past history. It is this element which influences French idealism and French aspiration at the present hour.

It is this grim fact that compels the mass of thoughtful Frenchmen to examine the League of Nations with a suspicion that is easily interpreted as hostility, which it is not. The rest of the world can well afford to gamble in the matter of the League of Nations. The French cannot afford to take any chance, and the limitations imposed upon them by their recent history and by all their history are easily translated into a revival of chauvinism, thereby doing France very great injustice.

And this, so far as I can find it, is the whole spirit of France at the present hour, a passionate determination to prevent a repetition of the recent horrors in France, not a desire to annex German territory nor German subjects. I do not believe any French Government could stand an hour which was convicted in the eyes of the French people of leaving open the Northern gateway.

For the United States, for England, even for Italy, now that Austria has disappeared, the League of Nations remains a possible experiment. It may succeed or it may fail, but its failure would carry no immediate and vital peril, but for France the case is quite different. A Germany of seventy millions of people will survive any rearrangement of territory that may be made with a shadow of recognition of the principles which are going to prevail at Paris. If France is left without guarantees against such a Germany and Germany chooses to regard the League of Nations as she treated her Belgian "scrap of paper," it will be France and France alone which will bear the immediate shock. The League of Nations might ultimately conquer Germany again as the present Alliance has, but meantime another desert might be created in Northern France.

This French frame of mind has seemed to many hostile to the League of Nations. I do not think it is that. I think most of all people the French would benefit by a real League of Nations and a successful League of Nations, and that as the most intelligent people in the world they see this clearly, but France cannot afford to take the chance and France will not take the chance, and therefore on the question of guarantees France is adamant, while England is ready and willing at all times to make almost any concession.

IV. Summary

Thus briefly and in a somewhat cursory manner I have sought to set forth three phases of the present situation in Paris—I do not believe there is any reason to think that territorial questions as between the great Powers will lead to differences of opinion. On the contrary, I think all the great Powers are approaching an agreement save with respect of two things, the Italian demands in Dalmatia and the Eastern Adriatic and Egean and the Russian situation. As to

Italy, all indications point to an agreement among all other nations that Italy surrender claims which are unjust and have no warrant other than that of force and possession. The view in Paris is that Dalmatia certainly and Fiume probably will go to the Jugo-Slavs and the Greek Islands be returned to Greece. Nor is there a less firm conviction that the mass of the Italian people will accept such a decision even though their government opposes it.

As to Russia, it is hopeless to make any comment now. In its early days the Paris Conference considered sending a joint Allied force to Russia to suppress Bolshevism, but upon examination it was discovered that no government would undertake to send any considerable force of its own troops. It was discovered further that the people of no one of the great countries would consent to such a use of their troops. Therefore the single logical course had to be abandoned.

In the next place there was consideration of sending some help to the nations in the process of emergence in the circle about Russia, notably Esthonia, Lithuania, and Poland, but again the same discovery was made. There remained, therefore, only the possibility of persuasion, of moral force and it was proposed that representatives of the Bolsheviks should be invited to Paris; but at this point the French struck. It was proposed that they should be invited to meet at Stockholm or Copenhagen but the Swedish and Danish people manifested the same lack of enthusiasm which characterized the French. To invite red-handed murderers to a Peace Conference was going it a little strong, so finally the Conference agreed to invite the Bolsheviks under certain conditions to meet in a forgotten Island in the Sea of Marmora practically inaccessible for the Western Powers and totally so for the Russians.

This is an obvious subterfuge. It means that since they were able to do nothing practical and compelled to do something promptly the representatives of the Paris Conference took a course which leaves the question as far as possible from the scene of their labors and left it substantially where it stood. It meant, as I can see it, the resignation by Western Europe and America of the task of restoring Russia by arms. It meant substantially leaving Russia to her own fate, but what remains to be seen is whether it means the total abandonment of the little nations on the outside fringe of Russia.

In the next article I shall endeavor to discuss in something of the same fashion the situation with respect to the smaller people and the developments of the Conference itself in its opening phases.

THE FIRST STAGE COMPLETED

(By Paris cable to the REVIEW OF REVIEWS *from Mr. Simonds)*

THE date of filing of this dispatch practically coincides with the completion of the League of Nations program and the departure of President Wilson for America. We have, therefore, come to the end of the first natural and logical division in the labors of the Peace Conference, and it is possible to give some summary of what has been accomplished in this period.

In the first place, the coming of President Wilson had an effect unforeseen either in America or in Europe. What was a dubious experiment in the minds of his own countrymen was transformed by the character of his reception into a real and unmistakable contribution to the making of a just peace. The mass of the peoples of Italy, France, and Great Britain welcomed the American President not merely personally and in his representative capacity, but also as a symbol of promise of deliverance from the tragedy which the war had made.

After more than two months of his stay in Europe President Wilson can still count on the right side of the balance; and I think he has complete justification for his journey in the forces and aspirations stirred by his coming. Mr. Wilson has also succeeded in persuading the Peace Conference to adopt his view that the League of Nations program should not only be included in the Treaty of Peace, but that it should be made the first work of the Peace Conference.

Before this article is in the hands of the reader the character of the program of the League of Nations already agreed upon will be fully known. It will carry with it disappointment to those who hoped for more rigid and final settlement of the machinery of international relations. It will arouse skepti-

cism. It must depend upon the developments of the future for attainment of its highest possibilities. And yet it represents something real, tangible, and definite in the direction of making it easier to preserve peace in the world.

The President did not frame the League of Nations. The contribution of the British to its actual language was very great. But the President did carry through his determination that the first thing settled should be the League of Nations.

Now it is impossible to disguise the fact that while there has been substantial progress made in the matter of the League of Nations, there has been no actual solution, no approximate solution—no substantial beginning, in the way of solving of the more practical and material questions. And there has been marked development of anxiety and restlessness, particularly in France, as a result of the prolongation of the Peace Conference without the attempting of any material results.

The real test of Mr. Wilson's service to America and to the world must be hereafter in the machinery with which to coöperate with the French and with the British, and in the prompt settlement of the great territorial and financial questions which still remain clamoring for adjustment.

We have in the past months seen Germany reorganize herself and arise almost from ashes. In Paris, as in London, there has been a distinct realization that the new Germany is the old Germany, with different labels but unchanged principles. We have consciousness here in Europe of the renewal of old German propaganda. We have a growing feeling that a great blunder was made in not fixing the terms of peace with Germany soon after the armistice, while Germany was still incapable of resistance; and there is a growing pressure on all sides that, in so far as possible, that mistake should be remedied without undue delay.

In sum, the first two months of the Peace Conference have, under Mr. Wilson's compulsion, been consumed in the formation of principles of a League of Nations. That task has been substantially accomplished. In that time all other great problems have been more or less neglected. Germany has recovered from the moral consequence of her defeat, and is preparing to resist in every way except by arms the just demands of her conquerors. France has felt the new menace, and French opinion has been disturbed by American insistence on solving moral problems before the material questions, which mean life or death to France, have been adjusted.

The American policy has tended to make a firm alliance with the British. Probably never in history have the governments of America and England been drawn so closely together. But, unhappily, this has been accomplished to some extent by a tendency towards separation between the Anglo-Saxon nations and their French Ally.

We have, therefore, to face certain unmistakable anxieties and difficulties during the next few months. We have still to face and settle all the great historical problems. We have made a very bad beginning by surrendering Russia first to Bolshevism and perhaps ultimately to Germany. But, on the other hand, there is a spirit of moderation and justice disclosed here in the purposes and demands of most of the nations, and the greatest danger now to be feared is long delay rather than permanent discord.

EUROPE'S MINOR FRICTIONS

BY LOTHROP STODDARD

EARLY in the year 1918 the German generalissimo Ludendorff remarked in an expansive mood: "Many chimneys will continue long to smoke, but the Great War will be over this year." Subsequent events have proven Ludendorff a true prophet. The Great War did end in 1918—albeit not in the way the doughty Prussian probably had in mind.

The first part of his prophecy was equally correct. Many political chimneys are still smoking—smoking furiously and creating an intolerable smudge that shows few present signs of abatement. These smoke-belching chimneys are dotted thickly all over the east end of Europe, stretching in a broad band from the Baltic Sea and the Arctic Ocean right across to the Black Sea and the Mediterranean.[1]

Peace may have descended upon Western Europe since the armistice of last November. But in Eastern Europe there is no peace. No sooner had the Great War ended than a new war began—or, rather, a whole series of little wars waged by the various elements which make up the population of this vast area. Race has risen against race, and in some instances, quickened by the Bolshevist leaven, class has risen against class within the same race.

Up to date no less than sixteen little wars have broken out, not counting in this astounding figure either the various campaigns in progress between the Russian Bolsheviki and the Russian Conservatives with their Allied-American-Czechoslovak backers, or the various purely class-struggles going on within particular race-groups. And, be it noted, these wars are termed "little" only by comparison with the "Great" War which is just over. Before 1914 some of them would have been considered respectable contests worthy of world-wide attention.

Since last November, Europe's eruptive east end has seen many a pitched battle with thousands of casualties, the total casualty list probably running far up into the tens of thousands, while the suffering imposed upon the wretched civilian population already worn down by four and one-half years of Great War is beyond calculation. The only way to visualize the present appalling situation of Eastern Europe is to take a bird's-eye view of the whole field, noting in turn the various areas of political friction or armed strife.

Armed Strife in Finland

Beginning our survey from the north, the first little war which comes to our notice is that being waged between the White Guard government of Finland and the Russian Bolsheviki. True, there is another war raging still further to the north, in the Archangel forests abutting on the Arctic Ocean, where American and British troops are supporting a Russian Conservative government against Bolshevik attacks; but the several campaigns being fought in Russia proper and Siberia are not to be here discussed, so we will begin our survey with Finland.

Finland has been independent since 1917, when the breakdown of the Czarist régime by the Russian Revolution enabled the Finns to throw off the hated Russian yoke. Shortly afterwards the Finns fought a most desperate class-war among themselves, the Conservative "White Guards" calling in the Germans, and the Social-Revolutionist "Red Guards" summoning the Russian Bolsheviki. In the end the White Guards triumphed and established throughout Finland a strongly conservative régime. Such a brazenly "bourgeois" government so near Petrograd, the Russian capital, naturally roused the ire of the Bolsheviki, and desultory fighting has been going on between the two governments. Recently large White Guard detachments have crossed the Gulf of Finland into Esthonia, to aid the Esthonians against the Bolshevik invasion of that country.

The Baltic Provinces Fight for Independence

Esthonia, Livonia, and Courland together form the so-called Baltic Provinces, stretching from the Gulf of Finland to Prussia. The Baltic Provinces are inhabited by two

[1]The reader who may wish to refer to maps will find them in Dr. Talcott Williams' article on "The Battle of the Boundaries," beginning on page 281.

distinct native races—the Esths in Esthonia and northern Livonia (a people of Finnish blood) and the Letts in southern Livonia and Courland. The Letts are often erroneously called Slavs. In reality they, together with their Lithuanian kinsmen to the southward, form a distinct branch of the Aryan race which has dwelt around the southeast corner of the Baltic Sea since immemorial times.

Besides these two native races, the situation in the Baltic Provinces is complicated by the presence of a strong German element which has formed the upper class since medieval times. The Baltic Provinces have long been under Russia, which oppressed them sorely. Therefore, in 1917, the Baltic Provinces, like Finland, expelled the Czarist officials and set up autonomous governments of their own—Esth in the north, Lett in the south. These governments were Radical but not Bolshevik. Then, in early 1918, the German armies came in, overthrew the native governments, and set up a very conservative régime, run by the upper-class Baltic Germans.

When Germany collapsed at the end of 1918, the German armies began to withdraw and the Esth and Lett régimes came back again. Then the Russian Bolsheviki took a hand. Declaring these governments *"bourgeois,"* the Bolshevik Government sent its "Red Guard" armies into the Baltic Provinces to Bolshevize them. The Esths and Letts have put up a plucky fight, the Esths winning a notable victory at Narva last January. They have been assisted by the Finnish White Guards previously mentioned, by Swedish volunteer legions, and by a British fleet which has kept off the Russian navy and rendered other valuable services. The fighting has been bitter and the Russians have committed great excesses upon the population. The worst sufferers have perhaps been the Baltic Germans, since all parties have gotten after them—the Letts and Esths because they were Germans, the Russian Bolsheviks because they were *bourgeois.*

A "Red" Blight in Lithuania

Lithuania, just to the southward of the Baltic Provinces, is in a similar plight. The Lithuanians, as already stated, are not Slavs, but during the Middle Ages Lithuania was united to Slavic Poland, and the upper-classes are to-day Poles, just as the upper-classes in the Baltic Provinces are Germans. Russia owned Lithuania in 1914, and was cordially detested by both Poles and Lithuanians. In 1915 the Germans conquered Lithuania and held it until their breakdown at the end of 1918. The Germans of course maintained a strong, military government. Since then there has apparently been no government. When German authority lapsed, the Lithuanians set about establishing an independent Lithuanian state, but the influential Polish element at once proclaimed the revival of the historic connection between Poland and Lithuania. Both sides raised ill-armed militias between whom there was sporadic bloodshed.

Soon the newly established Polish State to the southward sent in Polish troops to reënforce the Lithuanian Poles. But just then the Russian Bolsheviki appeared. Declaring that the Lithuanians must be preserved from *bourgeois* Polish rule, the Petrograd government sent in its Red Guards precisely as it was doing in the Baltic Provinces. The Russians have made considerable progress, and a great part of Lithuania is now in their hands. One reason for their success is the inability of Poles and Lithuanians to combine against the common enemy. Meanwhile the Russian Bolshevik troops regard both Poles and Lithuanians as *bourgeois,* with consequent wholesale excesses and destruction of property.

Poland Wages War on All Sides

Coming now to Poland proper, we find a most extraordinary situation. The new Polish State, though scarcely born, is fighting with all its neighbors. It is waging regular wars with the Russians on the east, the Ukrainians on the southeast, the Czecho-slovaks on the south, and the Germans on the west and north. And these wars are no child's-play. They are desperate conflicts, probably the bloodiest in the whole East European area.

The struggle with the Russian Bolsheviki is being waged both in Lithuania and the region directly east of Poland. This region, known as White Russia, is claimed by the Poles as having belonged to the Medieval Polish State. Like Lithuania, it contains a Polish upper-class. The peasantry, of Russian blood, are rising against their Polish landlords and are being aided by Bolshevik Red Guards who have occupied a great part of the country.

The struggle between Poles and Ukrain-

ians is bitter and bloody. Western Ukrainia, comprising both eastern Galicia and the adjacent Russian provinces as far east as the river Dnieper about the city of Kiev, belonged to Medieval Poland, and here as in Lithuania and White Russia, a Polish upper-class has persisted to the present day. The race-hatred between Poles and Ukrainians has always been intense and is envenomed by differences of religion, the Poles being Roman Catholics while the Ukrainians are Orthodox or Uniates.

Accordingly, now that they have been given free rein, the old antipathies have flamed up with all their ancient bitterness. In the Kiev region the Polish element, being very small, has been simply overwhelmed. In Eastern Galicia the Poles, reënforced by troops from Poland proper, are putting up a desperate fight. Cities like Lemberg and Przemysl rise like Polish islands out of the angry Ukrainian peasant sea.

The conflict between Poles and Czechoslovaks arose over the possession of Austrian Silesia, a region inhabited by a mixed population of Poles, Czechs, and Germans. Though small in extent, Austrian Silesia is valuable, containing some rich coal mines. Both the contending parties concentrated large bodies of troops in Austrian Silesia and one regular pitched battle was fought in January at Oderberg in which the Poles were beaten, the victorious Czechoslovaks occupying the country. Recently the Versailles Peace Conference sent commissioners to Austrian Silesia charged with orders to both Poles and Czechoslovaks to call off their war and await the adjudication of the Great Powers.

The struggle between Poles and Germans is far-reaching. The Poles claim the whole or parts of the four Prussian provinces of Posen, West Prussia, East Prussia and Silesia, which are inhabited by both races in varying proportions. Strong armed forces have taken the field on both sides and there has been much rioting by the civilian elements. As yet the bloodshed has been less than that in Austrian Silesia or Ukrainia.

Chaos in Ukrainia

Ukrainia is truly a disturbed area. Besides the war with the Poles already described, the Bolsheviki are making serious inroads and are reported to have occupied the eastern part of the country. The Conservative native government which maintained itself largely by German bayonets has apparently been crumbling ever since the Germans evacuated the country. Indeed, judging by the scanty and contradictory press-reports, Ukrainia to-day has no real government, but is torn by contending factions, Conservative, Radical, and Social-Revolutionist, with Don Cossacks and some French troops pushing up from the Black Sea ports adding their contribution to the tangle.

The Ukrainians have, however, found time to quarrel with Rumania over the provinces of Bukovina and Bessarabia. The northern portions of these provinces are inhabited by Ukrainians. By last reports the Rumanians were still holding all Bessarabia but had retired under Ukrainian pressure from Bukovina.

Rumania's War Legacy

Rumania is having her troubles, though her claims have a more legal standing, being based upon a secret treaty concluded with the Allied Powers just before Rumania joined them against the Teutonic Empires in the autumn of 1916. By this treaty Rumania was promised, among other things, Transylvania and a large slice of the Hungarian plain-country to the westward, including the Banat of Temesvar. The Banat, a square block of territory abutting on the north bank of the Danube, is inhabited by an extraordinary medley of peoples, rivaling even Macedonia. Rumanians, Jugoslavs, Magyars, and Germans live here in inextricable confusion, with one or two minor races thrown in for good measure.

The trouble is that the Jugoslavs also claim the Banat and are furious at the secret treaty of 1916, the Serbian Government, as spokesmen for the Jugoslavs, having declared itself not bound by an agreement to which it was not a party and of which it was officially ignorant. The upshot was that, as soon as Austria-Hungary collapsed last November, Rumanian and Serbian troops simultaneously invaded the Banat and quickly came to blows. Serious fighting was averted by the appearance of French troops from Macedonia who thrust themselves between the contending armies and have since kept them apart.

Aspirations of the Czechoslovaks

Before discussing the somewhat thorny question of the Jugoslavs it might be well to complete our survey of Czechoslovakia, whose conflict with the Poles we have al-

ready noted. Czechoslovakia (consisting of Bohemia, Moravia, and the Carpathian mountain country to the eastward) is largely enveloped by Germanic territories. It also has considerable minorities of Germans, particularly in Bohemia and Moravia, who desire to detach themselves from Czechoslovakia and join the projected Federated Germany. All this reënforced by traditional race-antipathies, has not made for harmonious Czecho-German relations. In fact numerous regrettable frontier incidents have occurred, together with considerable rioting between the civilian populations.

However, the bloodshed has been relatively small, the Czechoslovaks having concentrated their military energies mainly against the Poles. In the Carpathian region the Slovaks have had a certain amount of trouble with the Magyars, the Slovak country having of course formed part of Hungary. The Czechoslovaks also claim as part of their state the mountainous territory just east of Slovakia proper. This region is mainly inhabited by an Ukrainian population, though separated from the main body of their kinsmen by the mountain-wall of the Carpathians. The Czechoslovaks call these people Uhro-Rusins and assert that they desire to join the Czechoslovak state. The exact truth of the matter is obscure.

Jugoslav versus Italian

Jugoslavia presents a highly composite picture. The various branches of the "Yugo" or "South" Slavs spring from the same race-stock and are fundamentally one in blood, and speech. Nevertheless, they have been politically separated for so many centuries and have been subjected to so many foreign influences that they have developed strong particularist divergencies of religion, culture, and viewpoint which have hitherto kept them apart and are to-day making reunion difficult. The chief thing which keeps their internal dissentions down is the necessity for solidarity against hostile neighbors.

The old feud between Serb and Bulgarian has of course ceased to press, for the time at least, since Bulgaria has surrendered unconditionally to Serbia's Allies. The same is largely true of the Magyars and Austrian Germans, though there has been some civilian rioting in the frontier regions. Jugoslav attention is, however, intently focused upon the conflict with Italy. This conflict is one of the most serious, and perhaps the most pressing, which to-day threatens the peace of Europe. The debated zone between Jugoslavs and Italians stretches almost the whole length of the eastern Adriatic coast.

Public opinion in both Italy and Jugoslavia is highly inflamed and shows a regrettable disposition to fight rather than compromise. Armed clashes have already taken place, and actual warfare would probably have been already under way if the Western Powers—England, France and the United States—had not sent warships and troops into the disputed area. It is interesting to note that American doughboys are patrolling more than one especially volcanic point on the east Adriatic shore.

A Field for International Police

Such, in brief, is the present situation of eastern Europe. Our survey has been summary, touching only the high-lights, and passing over many interesting details. But enough has been said to show the absolute necessity of an effective international police-power for this whole region. Its peoples are unable to compose their feuds and settle down as peaceable neighbors. In a few short months they have already reduced eastern Europe to a cross between a bear-garden and a bedlam. If unrestrained, they may sink into a common welter of anarchy and ruin. One of the first jobs of the League of Nations will be the strict policing of Europe's eruptive east end.

WORK AND HOMES FOR RETURNING SOLDIERS

BY HON. FRANKLIN K. LANE

(Secretary of the Interior)

*[Secretary Lane's statement herewith for our readers summarizes his program for the nation's material progress, and points the way to immediate employment of many returning soldiers who would like to become farm producers. The article by Mr. Elwood Mead, which follows, has the complete endorsement of Secretary Lane, and sets forth the best plans for rural development that have been worked out through practical experience. Mr. Mead himself is our highest authority on land settlement.—*THE EDITOR.]

CONGRESS has much on its hands these days—problems of far-reaching foreign policy, wise methods of laying new taxes, the determination of a railroad policy, investigations of many kinds. There is no other body of men, it is safe to say, working so insistently and under such compelling strain as our two Houses of Congress. Matters which the necessities of war had compelled Congress to cast upon the Executive Departments have now come back into the hands of the National Legislature—suddenly, unexpectedly. And for these reasons it is not to be wondered at that a full-rounded and matured policy of readjustment has not been thus far evolved and enacted into law.

There is one matter of emergency, however, which should demand the attention of Congress at once and to which I believe that body will give thought and as to which it will act before the 4th of March. Our men are returning from France. Our war industries have been broken up. This means that there will be a temporary problem of unemployment during the transition period from full war speed to full peace speed.

Resume Public Work at Once!

To meet this situation the Government cannot act too swiftly. There should be a planned coöperation between our industries, the cities, the States and the Federal Government, to keep men at work. I do not mean that work should be made for men, but that work that is needed should now be done.

The fact is not generally noted, but this country has almost stood still for the past four years except in the promotion of those things needed to supply an immediate war demand in Europe or America. We have put into our railroads for their maintenance only enough to keep them in condition to run. Our building program has been limited to daily housing requirements. No large enterprises of any kind have been entered upon excepting the construction of something that would sell to someone at war. Therefore, in the larger view of material progress, these years have been wasted, though they have made sure a greater material progress in the future. We now need to carry forward the projects and plans which for a time we laid aside, and out of what we have learned through the war of the world's needs and of our ability to meet them, we can gain a new assurance as to our future.

Resources Awaiting Development

But while we are viewing with appreciation those things which we did during the war, it is proper now that we should give ourselves concern as to those things in which we found ourselves delinquent. Our roads were poor; they broke to pieces under the strain of heavy motor traffic. Our rivers were clogged; they had been abandoned for so many years that there were no boats available to relieve the traffic of congested railroads. Why not now make good roads and clear rivers? Falling water we had which could be converted into power, but capital had feared to develop these hydro-electric opportunities because of short-sighted laws.

We became alarmed in the midst of the war lest our oil supply should fall short, and gasless Sundays resulted. Yet we have seven million acres of unexplored oil lands withdrawn from public entry. Why not release these opportunities? The world was crying aloud for bread, and we suddenly realized that the farm population of the United States was gradually declining in proportion

to the city population; that now less than 50 per cent. of our people are on the land. All these things point toward work that should be done. The difficulty now is that private capital is trying to find into what safe channels it can be led, while public credit is embarrassed by the large war calls that have been made upon it. Once confidence has come back we shall carry on, and this is the time that tests the thoroughbred.

Putting Soldiers Upon Farms

My suggestion as to the solution of our immediate problem is a plan for putting soldiers upon farms. This I proposed as an expression of gratitude to the soldier, as a means of reclaiming great bodies of our unused lands, and as an opportunity to demonstrate that farm life can be made not only profitable but enjoyable by careful planning. Congress is considering the creation of a fund of one hundred million dollars out of which we can make farm homes for returning soldiers and sailors. This will not be enough to guarantee against great labor discontent, but it will show how some who are willing to work may find both work and homes without being the subjects of bounty.

FARM SETTLEMENTS ON A NEW PLAN

BY ELWOOD MEAD

(Chairman of the California Land Settlement Board)

THOSE who believe in a planned rural development start with the assumption that land settlement is a subject of great public importance; that the creation of stable and efficient communities is a task worthy of the ablest minds, and that there is in the Government service and in the State Agricultural Colleges a large body of trained men who should be mobilized for this service.

A planned rural development is needed to meet the conditions of the 20th century. These are entirely different from those which confronted the pioneers who opened their way through the wilderness with wagon, axe, and gun, or who pushed further west across the trackless prairie where in the arid and semi-arid sections a pitiless nature bedeviled them with heat and cold and insect pests. The struggle to survive made them hardy and self-reliant but left them neither time nor opportunity to study problems affecting the general welfare. Free or cheap land made them hopeful, confident and independent but they did not realize that the Government could be made a useful, helpful agency to lessen the hardship and risk of their struggle, nor that they were laying the foundations of a civilization to last for unnumbered generations.

Now the free land is gone. To buy and equip a farm is a costly undertaking. The percentage of our population which attempts it is rapidly decreasing. Yet every year thousands of young men, who lack capital but love farm life, reach the age when they ought to marry and settle down to their life work. Something is needed to give them the opportunity formerly afforded by free or cheap land, and the best way to create that opportunity is for the Government to give financial aid and expert direction to rural development.

The experts of the Government departments and State agricultural and engineering departments should be the responsible planners. They should be called from the side lines to take part in the game. They would bring to the task not only their own but the world's accumulated knowledge and experience. No more inspiring opportunity could be given to men of ability and constructive minds than a field in which to demonstrate the practical value of their knowledge in helping industrious men secure a fair opportunity to enjoy landed independence and to induce men and women of intelligence and ability to perform the important work of the country with satisfaction to themselves. They would select areas large enough to create a definite community life and make coöperative activities possible; determine how the soil, climate, and market facilities of these areas could be best utilized; fix the size of farms needed to give employment and a comfortable living for families; determine the kind of agriculture which

would maintain soil fertility and the form of tenure which would lessen speculation in and non-resident ownership of land.

Communities Should Be Organized

These planners would realize at the outset that the success of these settlers would depend on getting the farms fully developed in the shortest possible time; that the careless cultivation of the pioneers, dealing with land that cost little, is no longer possible, and that facilities to market to advantage the crops grown must be provided. The social side of farm life would have attention. There would be a community center with a baseball field for the farmers' sons. A vocational school, a social hall, coöperative organizations for stock-breeding and buying and selling would make these communities entirely unlike the individualistic settlements of the past.

Social and Economic Progress of Other Countries

Other countries have realized more clearly than the United States that the profits of farming depend almost as much on ability to sell to advantage as on ability to grow large crops. In Denmark, Ireland, Germany and Australia the cultural work of the farm is supplemented by coöperative distributing and selling activities which bring the producer and consumer into closer relation and cut out needless expenses and agencies. One looks in vain in America for the publicly owned cold-storage warehouses at terminal points, such as exist at Manchester, England; Hamburg, Germany, and Melbourne, Australia. The coöperative slaughter-houses of Denmark, New Zealand and Australia, and the municipally owned abattoirs and milk-distributing systems of several progressive countries of the old world have done much for their rural progress.

American Inefficiency

The absorption of the American farmer in his own affairs and his neglect of what lay beyond the borders of his fields have left those who control the management and distribution of his products free to consider only their own interests. The intelligent pressure needed to secure efficiency in all lines of human endeavor has been lacking in this feature of American rural life. The result is that the method and equipment for distributing perishable food products in the large cities of America are primitive and inefficient beyond belief. The way food products are received and distributed in large cities is in sorry contrast to our methods of handling the human tide that flows through their gates.

Nor is the lack of efficiency the only cause of low prices for that which the farmer has to sell and the high prices which the consumer pays. The channel from the grower to the consumer has, either through indifference or design, been made needlessly costly and complicated. Brokers, warehousemen, wholesalers and retailers are linked together by common interest in having nothing interfere with the toll they levy on the farmer. Those farm profits which have to go through processes to reach the form used by consumers have in recent years been largely controlled by combinations which have erected dams in the current flowing from the country to the cities which give them power to manipulate prices that are becoming more and more a source of anxiety to the nation and of political unrest on the part of the farmers of this country. As much is charged for distributing milk as the farmer obtains for producing it. It took mob rule to shake off the strangle-hold of the tobacco trust, and nothing gives farmers more anxiety than the power to control prices possessed by the milling and meat-packing combines.

The average cost of distributing and selling farm products is greater than the sum paid the farmer for growing them, and this is due largely to inefficient, chaotic methods and equipment which are a half-century behind the times and one of the great menaces to rural progress.

If only one rural community could be created in each State under the direction of the State Agricultural Colleges or, better, by the State coöperating with the Federal authorities, it would start a movement for the improvement of our marketing methods and facilities, which is sorely needed.

The farmers of remote Australia and New Zealand have for years been able to borrow money at 4½ to 5 per cent. with which to buy and improve farms. They could do this because they secured the benefit of government credit through postal savings and land banks. The American farmer, acting on the doctrine that every man should look out for himself, has had to pay from 6 to 18 per cent. for operating capital, often obtaining money only as a personal favor and too frequently unable to secure the needed amount on any terms. In an unplanned, in-

dividualistic rural society, what the individual wants is tangible and concrete; what the community wants is remote and abstract, and the result here has been an unplanned, wasteful, discordant rural growth. Town development was left to the real-estate subdivider; country development to the colonization agent.

Changing View of Land Ownership

Until recently few objected to individuals or corporations owning all the land they were willing to pay for. As a nation, we believed that men strong enough and shrewd enough to acquire the earth were entitled to own it. Now we are beginning to regard the ownership of land as a trust involving obligations to the State; to believe that land ought to be well farmed; that its fertility ought to be maintained; that those who cultivate it as wage-earners or tenants ought to have opportunities for advancement and self-improvement and thus be able to carry on this service to the nation with profit and satisfaction. Where present conditions do not make this possible, the creation of better opportunities is a duty of the State.

That belief is being strengthened by the decrease in the number of farmers in great agricultural States like Iowa and Missouri; by the increase in farm tenantry and dry-rot in rural community life. During the last fifty years the area of farming land in New England has decreased 42 per cent. In the last seventy years the sheep on New England farms have decreased from 4,000,000 to 439,000, or 89 per cent. The newspapers of the last thirty days have had disquieting reports of emaciated children and discontented city workers, due to the high prices and inadequate supply of milk. In the last quarter of a century the population of Massachusetts increased 59 per cent., while the local milk supply diminished 24 per cent., and New England now imports milk from Canada.

The soil of Connecticut is as fertile as the sand dunes of Denmark, and the nutmeg State is as thickly peopled. Yet in the last sixty years 800,000 acres of Connecticut land has gone out of cultivation while in the same time over 1,000,000 acres has been added to the cultivation area of Denmark. In Connecticut rural life is unorganized; in Denmark rural development had the benefit of state aid and direction and of organized community life. Coöperative slaughter-houses, coöperative egg-shipping agencies, and a system of vocational training unsurpassed anywhere help to explain why rural life in the foreign country has advanced while in the home State it has declined.

Planned Rural Development Should Be Based on Community Units

Community life and spirit cannot be created by dealing with scattered individuals. There must be enough people living in close contact to make community action effective, to lessen the expenses of administration, and to give courage to the members who confront the hard task of earning a living and paying for a farm at the same time. Credit associations, coöperative livestock-breeding associations, vocational training schools, arrangements for shipping and selling direct to consumers—these and other collective tasks will add to the interest of rural life, challenge the ability and develop the capacity of rural leaders. The British Commission fixes the minimum number for such rural communities at 100. Danish and Australian experience confirms this.

The psychology of group settlement must be seen to be realized. What I wear and eat is important only when contrasted with what is worn by my neighbors. If they wear patched clothes I am not mortified if my trousers are ragged. A group settlement practises economies and makes sustained efforts with cheerfulness and pride which are impossible to a single family living among easy-going prosperous neighbors. In the State settlement of California settlers who lack money to build the houses they desire or who object to war prices are living this winter in their barns. They regard this as an adventure rather than a hardship.

Significance of the Land Settlement Act of California

Since the beginning of this century thirty of the most progressive countries of the world have made government aid and direction in land settlement a part of the nation's activities. California is the only American State which has adopted this policy. In the hope that it will bring more clearly before you how a planned rural development differs from an unplanned one, I will outline briefly the procedure followed in the State settlement at Durham, Calif.

The land settlement act of that State created a board, appropriated $260,000 which is to be repaid in fifty years with 4 per cent interest, and gave the board authority to buy 10,000 acres of land and to subdivide and

A SEVENTY-FIVE HORSEPOWER TRACTOR OPERATED BY THE LAND SETTLEMENT BOARD, PLOWING LAND PREPARATORY TO GRADING AT DURHAM

(This tractor made possible the seeding of about 2,000 acres of grain. Without a power equipment of this kind such a feat would have been impossible within the limited time. Smaller tractors were tried, but they either lacked power or were unprofitable)

settle it as a demonstration of the advantages of skilled direction adequately financed. The Durham settlement of one hundred families, located on about 6000 acres of land, is the result of the first year's operation.

In this development the board had the co-operation and assistance of the State Agricultural College in selecting the land, estimating its productive value, and fixing the prices which colonists could afford to pay; made a soil survey which became the basis for fixing the size and price of farms; created a mosquito-abatement district to forestall possible malarial troubles.

The State Engineer's office furnished architects and architectural draftsmen to help prepare plans and specifications for settlers' houses.

The Office of Good Roads and Rural Engineering of the United States Department of Agriculture furnished the plans and supervised the construction of the irrigation and drainage systems.

The State Attorney-General secured by agreement the settlement of a water-right controversy which had extended over five years and had cost many thousands of dollars.

The benefits to settlers of these preparatory steps include, among other things:

Ability to reach an intelligent decision as to the productive value of each farm;

Ability to secure settlers without paying commissions to land-selling agents. This saved settlers over $100,000.

Twenty-two acres of land have been reserved as a community and recreation center and movements are in progress for the establishment thereon of a vocational training school in agriculture.

Concrete and gravel highways are being built to connect the farms with the concrete State highway.

Settlers have had the advice and aid of a farmstead engineer in locating farm buildings and laying out fields.

A community contract has been made with an electric power company, which gives settlers electric current for power purposes at ¾ cent per kilowatt hour and for lighting purposes at 2 cents per kilowatt hour.

A large part of the land was made ready for irrigation and planted to crops before being offered to settlers. This enabled them to begin immediately the vocation they understood, and they could see in those growing crops money for the first year's living expenses and to meet the next instalment on their land. Leveling the land for irrigation was the aid settlers most appreciated. This is an engineering rather than an agricultural task. It requires a special knack and experience and an equipment that the individual settler cannot afford. In order to do this economically the board invested $10,000 in land-leveling equipment. Doing this has saved settlers time and costly mistakes due to lack of skill and experience in this kind of farm work.

An expert superintendent, to whom settlers can go for advice, is a feature the value of which settlers appreciate.

A coöperative stock-breeding association has been organized, and the professor of animal husbandry of the State University is its president.

Settlers have twenty years' time and amortized payments at 5 per cent. interest on land and improvements. Their own capital has been supplemented by State funds in financing the initial equipment of farms. In this way the full earning power of the land is realized the first year.

In the selection of settlers the board gave preference to married over unmarried people; to tenant-farmers over almost anyone else; to the man with adequate capital over the man to whom the undertaking would be a serious financial risk. Fifteen hundred dollars, which is about 10 per cent. of the average cost of equipped farms, was fixed as the minimum capital which a settler must have. The average cash capital of settlers accepted was about double this sum.

The number of applicants was several times the number of farms. Yet there has been no complaint nor criticism of unfairness on the part of those who had to be denied, nor any political pressure exerted to induce the board to modify its decisions.

One year ago no owner had lived on the land for twenty years. On last Christmas Day there were over one hundred home-owners, a large percentage of whom were living in houses which for convenience of arrangement and attractive appearance will compare favorably with those of any country community. This is due to the fact that the settlers had the benefit of some of the best talent of the State in planning and erecting their homes. Good taste costs no more than poor taste.

(The dot in Butte County represents Durham, where 100 families are developing 6000 acres of land with State aid)

LOCATION OF CALIFORNIA'S LAND SETTLEMENT, AT DURHAM, BUTTE COUNTY

The saving to this community by having the building program financed and carried out under the board's direction has to be seen to be realized. Instead of leaving each settler to look after the building of his house and other improvements unaided, which would have meant that over one hundred men would have had to abandon farm work at a critical time to hunt for carpenters, try to engage plumbers, do many things they did not understand, under conditions which compelled them to buy quickly and hence to buy at a disadvantage, the board made this supervision a part of the State aid. The material for the improvement of farms was bought at wholesale in carload lots and for cash. In this way the settlers were able to secure wholesale prices.

Precautions Against Speculation

It was recognized that the success of the colony would cause a rise in local land values and that settlers would be tempted to sell their holdings. If this kind of settlement was to achieve the results California desired settlers must be impressed at the outset with the idea that they are creating a permanent community and not being given an opportunity to make a quick turnover. The contract under which they take their farms requires them to enter on actual residence within six months and to continue to reside on the farm for at least eight months in each calendar year for a period of not less than ten years, unless prevented by illness or some other cause satisfactory to the board. No farm can be transferred, assigned, mortgaged, or sublet within five years without the consent of the board.

It was thought in some quarters that settlers would resent these restrictions, but most of the applicants had been tenants who did not want the conditions from which they had escaped reproduced in a community which is to be their permanent home. The restricted freehold of this settlement is not the most logical form of tenure. It is, however, a move in the right direction, and the demand for these farms has shown that community development does not need the incentive of speculation.

A FARMER'S HOME AND ALFALFA FIELD IN THE DURHAM STATE LAND SETTLEMENT AT DURHAM, CALIFORNIA
(Seventy families live within a radius of one mile from the community center)

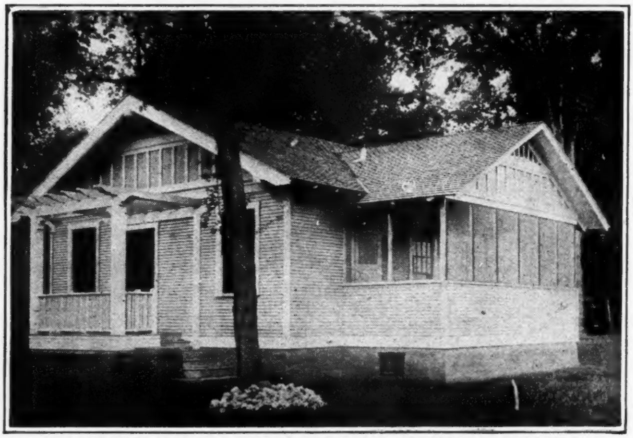
Provision for Farm Laborers

Twenty-six allotments in the Durham settlement are occupied by farm laborers. Each allotment has an area of about two acres, and on these comfortable homes have been or are being built. The purpose is to give wage-earners on farms homes where the wives and children can live in comfort and independence; where they can have land enough to grow fruits and vegetables for their table; to keep a cow, some pigs and chickens, and to have the feeling of independence and self-respect needed to create the right kind of character in the rising generation.

The homes of the farm workers at Durham represent a form of rural democracy which needs to be extended. Already the wives of some of these wage-earners have secured flocks of pure-bred fowls from the State Agricultural College. One settler, who is a carpenter and who has earned $5 each day working at his trade, has, with the help of his wife, built his home by working mornings and evenings. A farm laborer who had only money sufficient to pay the 5 per cent. deposit on the land now has over $600 with which to start building his house. Since July 1 he and his wife, together, have been paid $6.50 a day and their board for working on adjacent farms and orchards. For two months of the time every dollar of their wages was deposited in the local bank. These examples might be multiplied to show what great results come from giving proper incentive to hope and ambition. These people will be our future farm-owners.

A pressure water system has been provided

HARVESTING AND THRESHING "LADY WASHINGTON" BEANS AT DURHAM
(Second crop harvested since the settler took possession, June 25, 1918)



A FARMER'S HOME ON ONE OF THE ALLOTMENTS OF DURHAM
(Type of farmhouse erected for settlers by the Land Settlement Board)

for the farm laborers' allotments. Provision for electric lights has been made in their houses. They are as interested in the progress of the community as any farm owner, and participate actively in the community conferences regarding matters affecting the general welfare.

The constitution of the Stock-Breeders' Association requires that the colony shall have only one breed of dairy cattle, one breed of hogs, and two breeds of sheep. Only pure-bred sires are to be used, and every dairy animal coming into the settlement must be tested for tuberculosis. All sires are to be owned by the association or approved by it. This association now owns two of the best-bred bulls in the State, one bought by the association and the other a gift from Mr. Kiesel, a public-spirited banker.

Good Showing for the First Year

The whole area of the settlement is in crop and the first year's returns from many farms have given their owners a generous income. *Every payment due the State has been made. Every contribution to the collective activities has been met in full,* and this has been accomplished by settlers of limited capital who have found here opportunities and an inspiration unhoped for under individualistic, unplanned development.

The Durham settlement is more than a self-supporting addition to the State's population and productive wealth. It is a significant patriotic achievement. Its members have a pride in their enterprise; a neighborhood solidarity lacking in individualistic colonies. They believe they are creating institutions of enduring value, and they have a love for the State and a devotion to its interests because of what it has done for them and because what has been done for them and because what has been done here shows a public desire to make economic equality and contentment in rural life a definite achievement. Settlements of this kind are an antidote for tenantry; the best way to stop the drift of youth to the cities.

Homes for Returning Soldiers

This demonstration in California has an important relation to the movement to provide rural homes for returning soldiers. Every soldier who wants to live in the country, and who is qualified to succeed there, should be given a chance. It cannot be done successfully by financing farm-buying by scattered individuals. It can be done through a planned community development. That is the conclusion of all the countries which have had the most experience and have given the most study to this subject. England, Australia, New Zealand, and even France, are

A FARM LABORER'S COTTAGE BUILT BY MORNING AND EVENING WORK

making generous but carefully-thought-out provisions for communities of soldier settlers.

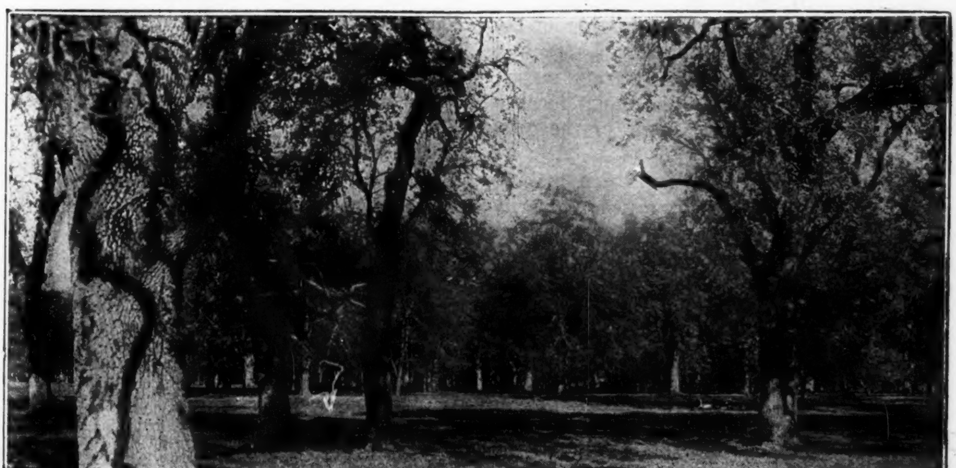
When one looks over this country for opportunities for such development the areas first thought of are those to be found in sections of the country now unpeopled and which need reclamation in some form. Settlements can be created on the arid lands of the West, on the lands which need drainage, and on the cut-over timber lands, which would not disturb any existing cultivators. The achievements of the United States Reclamation Service in creating productive and prosperous communities on what were before desert wastes show that such reclamation can be made a solvent and successful undertaking. But while these sections of the country have the greatest areas, soldier settlements should not be restricted to them. Every State has helped win the war; every State will be benefited by having its young men return and help give new life and direction to agricultural progress.

In many of the older States such settlements should be created because of the food needs of their industrial population. These States have large and varied local markets, with fine opportunities for skilful and intensive cultivation. They also have many areas overlooked or neglected from causes in no way related to lack of soil fertility. The rural population has been depleted by a wrong system of rural education which trained men for vocations of the city rather than the country, and by the migratory and speculative trend of development which made distant hills look green.

These States also have reclamation problems and acute conservation needs. Brush land needs to be cleared; the fertility of worn-out fields restored; existing farm boundaries changed; and better roads built. The old, careless, wasteful cultivation of much of this country needs to be displaced by scientific farming, which will make the maintenance of soil fertility the basis of successful farming and a national obligation. Unsocial, unprogressive rural neighborhoods would be replaced by organized rural life which these young soldiers, who have had their outlook enlarged and their love of land strengthened by what they have seen of France and England, would, if properly helped, establish.

The importance of such communities to the agriculture of the older sections of our country cannot be exaggerated. No one can travel through the Piedmont region or along the hills bordering the Ohio River without realizing how rapidly the agricultural wealth of some sections is being destroyed and how slow and costly will be its replacement. It took unnumbered centuries to build up the eight or twelve inches of fertile soil which once covered these hillsides. When it is gone they will be useless. Yet we are letting them be washed away at the rate of six hundred million wagon-loads a year.

The policy which Secretary Lane has presented to the nation, if adopted, will both add new productive areas and help to end our crude and destructive methods of cultivation. It will start this nation on a new and better kind of rural progress whose effect will be felt for many decades to come.



VIEW IN THE TWENTY-TWO ACRE RESERVE FOR PUBLIC PURPOSES AT THE DURHAM STATE LAND SETTLEMENT
(This natural park was left nearly in the center of the tract by Senator Stanford when he was the owner of the property)

AN APPLE ORCHARD IN OXFORD COUNTY, MAINE

(This is a long-neglected orchard that has been renovated under the direction of the county agents who are demonstrating to Maine farmers how the quality and quantity of the apple crop in that State may be improved. The new vitality is shown in the abundant bloom)

MAKING OVER THE NEW ENGLAND FARM

NOW that the era of free land in America has come to an end, the nation is taking account of its farm resources as it never did before. The food demands of the war period, not yet remitted, have at least brought about a searching examination of soils, to the end that the real agricultural capacities of our forty-eight States are no longer regarded as suitable subjects for vague and idle generalization. The citizen who does not know definitely what the farms of his State can best produce is no longer considered well informed, for during the past few years groups of men throughout the country have made it their business to find out what was being grown in every section and whether or not in any particular locality the best possible use was made of the gifts of nature.

Not all the men who have been making these investigations are interested primarily in farming as a business, but they are all interested in the farmer himself as a member of the community. Some of the studies in rural conditions are conducted in the interest of education. This has been the case in the South especially, and it is true also of New England and parts of the West. Educationists know that the problem of the country school is vitally related to movements of population, which can only be understood when the conditions of agriculture are known. Hence the importance, from the standpoint of the improved rural school, of knowing what population can be sustained by any given farming district and whether farming in that district can be made more profitable by introducing new methods or new crops.

The General Education Board has used its resources generously in support of farm demonstration work. For several years it has made appropriations to the College of Agriculture of the University of Maine and the New Hampshire College of Agriculture to enable this type of coöperative effort to be continued in the States which those institutions serve. At present a fund of $80,000 is available each year in the State of Maine alone and more than fifty farm demonstrators are employed under direction of the extension service of the College of Agriculture. The last report of the General Education Board gives interesting details of the methods developed in that State.

Maine has about 60,000 farms, but many of these are no longer yielding a profit to their owners (80 per cent. of whom are native white Americans), and there is a smaller acreage under cultivation than in former years. The drift of farm-bred youth to the cities has been quite as noticeable here as in the rest of New England. This, of course, has worked to the detriment of rural interests generally.

Local farming conditions differ widely

A NEIGHBORING ORCHARD, PHOTOGRAPHED AT THE SAME TIME AS THE ONE ON THE OPPOSITE PAGE
(The neglect of the trees is shown in the scarcity of bloom)

from county to county. Aroostook County, for instance, is chiefly interested in producing potatoes; Kennebec County's principal interest is dairying, while Oxford County devotes most of its attention to apple orchards. The farm demonstration work introduced by Dean Merrill, of the College of Agriculture, adapts its methods to these varying local conditions. The demonstration staff comprises a director of extension, who acts as leader of county demonstration agents, an assistant county demonstration leader, a State leader of boys' and girls' clubs and his assistant, one specialist each in farm management, poultry, dairying, and home economics, and fourteen county demonstration agents, with a clerical staff and a considerable number of emergency workers. All the demonstration agents were born on the farm, and ,with one exception, they are graduates of the Maine State College of Agriculture.

A GIRDLED APPLE TREE BEING SAVED BY BRIDGE

Each county agent gives primary consideration to one particular crop or product, but he always seeks to stimulate the farmer's interest in "side lines"—small fruits and grains, gardening, pork-production, poultry production, boys' and girls' clubs, community organization, and so forth.

The chief activities to which county agents devote themselves in Maine are the care of

A VERY OLD APPLE TREE GIVEN A YOUNG AND VIGOROUS TOP BY INTELLIGENT PRUNING

orchards and the handling of apples, the promotion of dairying and its related interests, the production of hay and silage crops, and demonstration in growing potatoes, corn, and small fruits.

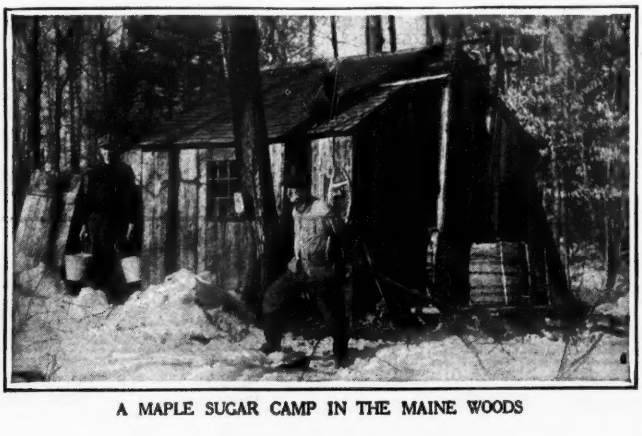
The agents are teaching the Maine farmers how to make their apple orchards more profitable. The older and more neglected the orchard, the better the opportunity for the demonstrator. He enters into an agreement with the farmer for a period of four or five years and then invites in the neighbors, explains to them the cause of the adverse conditions, instructs them in the fundamentals of pruning, and, setting aside a part of the orchard for demonstration purposes, sends the men up into the trees to do the pruning under his direction. Later, the trees are fertilized, sprayed, and properly cultivated. A part of the expense thus incurred is met by productive crops that are grown on the ground. Within three or four years the demonstration plot is wholly distinct from the rest of the orchard, and points the lesson that the demonstrator wishes to enforce more graphically than a library of treatises on horticulture.

Meanwhile, the demonstrator, besides showing how to renovate old orchards, is teaching the proper planting and care of young trees. The farmer learns from him how to select the stock, to prepare the ground, to fertilize, cultivate, and otherwise care for the young trees and to grow profitable crops on the ground while the trees are coming into bearing. Our illustrations show the practical way in which these lessons are impressed on the farmer. Coöperative marketing is also promoted through fruit-growers' associations.

Hay is the farm crop to which Maine is by physical conditions best adapted, and it is the State's most valuable crop. The county agents are showing the farmers how production of hay may be increased by the better care of meadows, but their main purpose is to persuade the farmer that it is more profitable in the long run to feed the crop to animals than to sell it as hay. The value of Maine's dairy products is only a little more than half that of her hay crop. The demonstrators argue that the farmer is now virtually shipping out of the State and selling the soil in the form of hay, whereas he might transform his hay into the more valuable products—meat, milk, butter, and cheese—and return the manure from the cattle to the soil. So the county agents seek to utilize the hay within the State by encourging the multiplication of herds.

The growth of silage crops and the building of silos are stimulated by the county agents. In certain counties silage corn is an uncertain crop on account of the short growing season, and millet is being substituted as a silage crop. Silo construction "bees" have superseded the "raisings" and log-rollings of pioneer times. One of the farmers in a neighborhood having provided the necessary material for a silo, the neighbors come together on an appointed day and, under the instruction of the county agent, put up the structure.

These are only a few of the ways in which the farm demonstration work is teaching the farmers of Maine that their industry under modern conditions is largely a community enterprise, and that by his own unaided effort the individual cannot hope to succeed. All this is preparing the ground for precisely the kind of rural community effort that is outlined so clearly by Mr. Elwood Mead elsewhere in this Review.



A MAPLE SUGAR CAMP IN THE MAINE WOODS

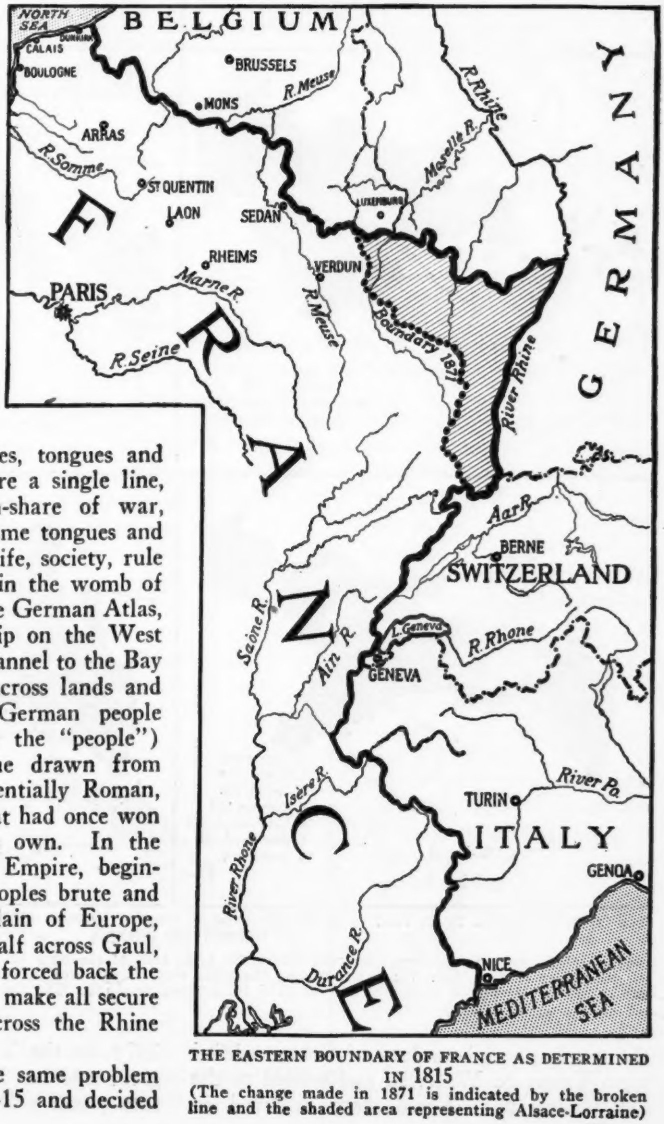
THE BATTLE OF THE BOUNDARIES

BY TALCOTT WILLIAMS

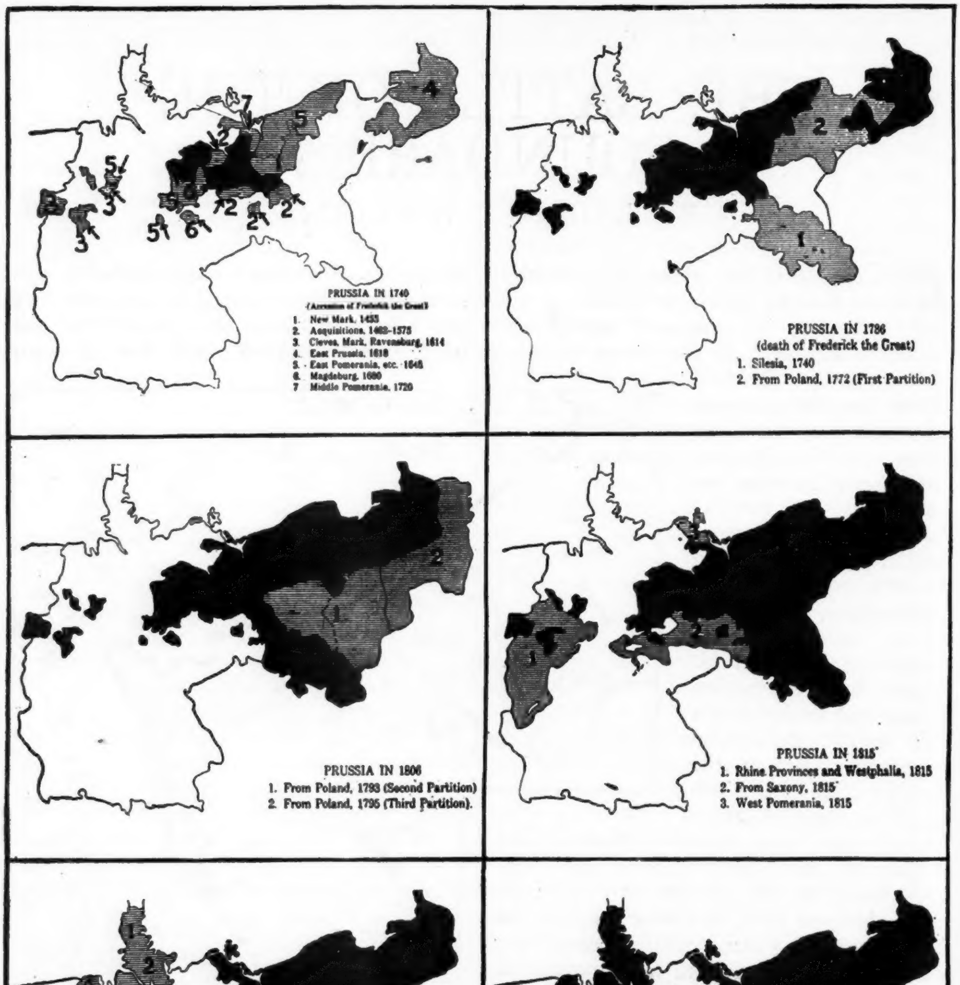
THE Battle of the Boundaries extends across Europe from the Rhine to the Ural. Winning the war is a task direct, immediate and clear, by the side of marking its boundaries. In each of the new lines drawn a possible war lies unless a League of Free Nations substitutes arbitration for battle.

From the Treaty of Verdun (843) between the three grandsons of Charlemagne, the boundary on the Rhine separating the halves of his Empire, has been drawn by war and by battle for 1076 years. Boundaries many there be on the earth's surface over which successive empires have striven under many dynasties, tongues and peoples; but nowhere is there a single line, deep-graven by the plough-share of war, where the same races, the same tongues and the same opposing views of life, society, rule and the arts have wrestled in the womb of time for ten centuries. In the German Atlas, France begins a narrow strip on the West coast of Europe from the Channel to the Bay of Biscay, extending itself across lands and regions belonging to the German people (*Deutsche* once meant only the "people") driving back with a tongue drawn from Rome and a civilization essentially Roman, the Central German race that had once won all Western Europe for its own. In the French Atlas, the German Empire, beginning in savage lands and peoples brute and uncivilized in the central plain of Europe, rolled back a civilized race half across Gaul, a race which in its turn has forced back the alien tide, until it proposes to make all secure in the future by pushing across the Rhine again.

Europe in council had the same problem before it at Vienna in 1814-15 and decided on the line which had taken shape by the successive decisions of united Europe over two and a half centuries—substantially the line the French Revolution found. For 223 years



THE EASTERN BOUNDARY OF FRANCE AS DETERMINED IN 1815
(The change made in 1871 is indicated by the broken line and the shaded area representing Alsace-Lorraine)



From "Collected Materials for the Study of the War," compiled by Albert E. McKinley (Philadelphia)

GROWTH OF PRUSSIA

(The solid black on each map generally shows the total area at the date of the preceding map, the shaded area the territories since added. On the first map the solid black is the area in 1450. On the map for 1806 the dotted line separates the Polish territories lost in 1815 from those retained. The limits of the German Empire in 1914 are shown on each map)

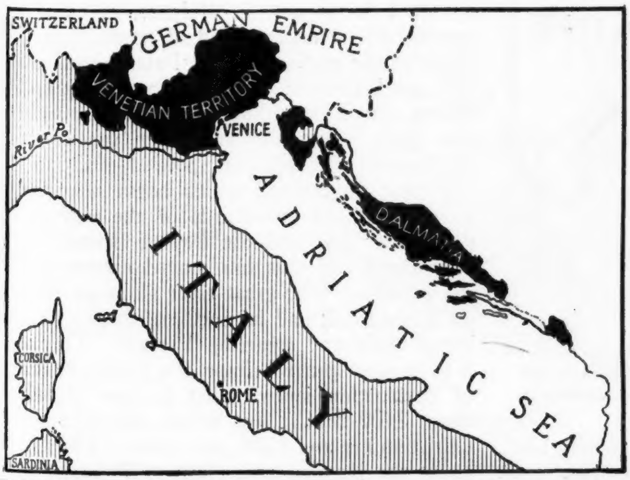
the northeastern boundary of France eddied from Valmy to Waterloo and settled to the old landmarks. These were removed in 1871 by the Treaty of Frankfort and the great war has followed. The prospect of a future war will be diminished in proportion

AREAS (IN SOLID BLACK) NOW CLAIMED BY ITALY

as the boundary of the past, the one that Europe settled on at Vienna by following the past, is changed by the Treaty of Versailles. It is not fortifications or military advantages or strategic reasons or economic advantages that defend boundary lines and make them secure; but peace, goodwill and a mutual sense of justice secured. It is this that makes the one longest boundary, without any defenses whatever, the line between the Union and the Dominion, the United States and Canada, the most secure the world around. As the new French boundary secures this, it will share the same security. It will be insecure as it lacks this "cheap defense of nations."

The Slav Boundaries

Italy is secure in its boundaries because it sought unity, with self-determination. The boundaries of Slav races are difficult and insecure because they seek self-determination without unity. No boundary can be drawn between any two of the Slav races which will suit both. The rough and approximate justice which can be carved out between Italy and Jugo-Slavia-Serbia on the Adriatic can never remain in peace unless arbitration be provided, enforced by a League ready to make resistance to a decision perilous to the aggressor. Whatever is said now for this particular boundary or that particular division line, this is certain in the future:—no general principle can be applied to the claims of Italian and Slav on the Adriatic without somewhere leaving one party or the other dissatisfied and irritated, ready to act when the hour comes making it safe to draw the sword unless this course is certain to mean loss. This is equally true of the line between Hungary and German Austria on one side and Jugo-Slavia and Rumania on the other. It is true of the dispute between Poland and Bohemia and true, too, of the triple conflict between Poland, Ukrainia and that part of Galicia which wishes to stand alone; of the western boundary of Poland, where it touches a population part German and part Polish, the northern boundary where German dwellers are between the Pole and the



THE BASIS OF THE ITALIAN CLAIM—VENETIAN POSSESSIONS (IN SOLID BLACK) IN THE FIFTEENTH CENTURY

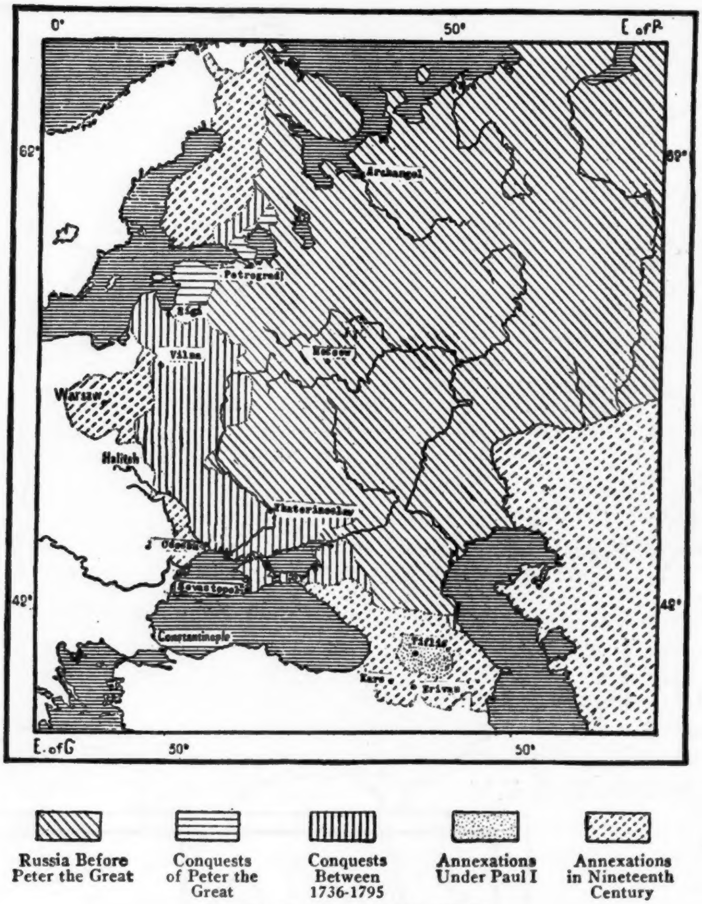
TERRITORY CLAIMED BY THE NEW REPUBLIC OF THE CZECHOSLOVAKS, HAVING A PRESENT POPULATION OF ABOUT 13,000,000, OF WHOM 10,000,000 ARE CZECHOSLOVAKS

RUSSIA'S WESTERN BOUNDARY IN 1914 AND ITS RELATION TO PROPOSED NATIONAL ALIGNMENTS

Baltic, and the eastern boundary where Lett, Russian, Ruthenian, and Ukrainian each claims special areas, historically by past and recent administration, racially by "natural" boundaries. The older the Slav fraction the more it trusts to history; the younger the more it trusts to existing conditions.

Poland lay for its early centuries behind the Lithuanian dike which was the first to feel the shock of the Central Asian hordes from 1000 to 1300. The Letts themselves were part of an earlier Central Asian movement which ten to twelve centuries or so B.C. rolled across the Russian steppes and filtered through the Russian forest and spread itself in a vast expanse, checked by central Europe. The remains of the Western edge of this great wave are present to-day in Finland, in scattered Letts and in Bulgars, races and tongues of a distant and diverse kinship. Look at the earlier map of Poland and you will see Lithuania still holding its place. When the Tartar horde ebbed, Lithuania was gone. Into the vast open space left Ruthenian and Russian poured. Of all the great migrations, which begin near the Pacific and end two-thirds of the way between the Ural and the Bay of Biscay, the only racial one that has moved eastward is the Russian. The great river plains of Russia in the south and its northern forests were swept again and again by Tartars. To put it in its most general shape, the Asiatic besom of destruction swept what is now Russia about 2400 B. C.; just before and after the Christian era and 1200 years later. The last swept the Russian area clean to Poland and the Slav race, now called Russian, slowly crawled, 1000 years gone, first into the river

Above—Poland of the Eighteenth Century; Below—the Successive Partitions of Poland (1772-1795)



GROWTH OF THE RUSSIAN EMPIRE
(According to the historian Dragomanov)

plains and then hewed its way into the great forest which still covers 40 per cent. of Russia.

Old Battle of Boundaries

Lithuania in the fourteenth century dwarfed Poland. Its seaboard was narrow, a mere strip between Prussia (the Borussia which held the German Knights' town of Königsberg) and Courland, itself German in origin, by rule and by immigration. Narrow at the point where it touched the Baltic, it spread through the fourteenth and fifteenth centuries a vast bulk of over 300,000 square miles, ruling the western provinces of future Russia, extending to the Black Sea over most of Ukrainia, holding Kieff and holding the eastern bulwark of Europe for three centuries from the days when the Golden Horde ruled from its turbulent camp on the Volga, through the days when the Kipchak Tartars held all north of the Black Sea until first Genghis Khan and then Tamerlane smote all between Ural and Poland. Weakened, Lithuania was annexed by the Russian Czar in the seventeenth century and for a hundred years it was crime to use its name and tongue. Its peasants shared the change from freedom to serfdom which marked Russia and nowhere was a more ignoble, brutal or capricious slavery. Emancipated in the last century, it is on this foundation that free institutions have to be established for a race whose literature a generation ago had more books and newspapers published in the United States than in Lithuania. Shrunken by the claims of Poland and Russia, it is certain to demand boundaries covering the history of the past and the tongue of the present.

TERRITORY OCCUPIED CHIEFLY BY JUGO-SLAVS (SOUTHERN SLAVS)
(The horizontal shading indicates Italian territorial aspirations)

It will contest Lemberg with Ruthenian and Pole. It will have its claims in Slovakia. It will ask for a seaboard cutting off Courland. Czecho-Slovakia has its claim in Silesia, its unsettled boundaries with its neighbors on all sides. Rumanian and Magyar have crowded the Serb or Jugo-Slav from the north out of the Banat. Each will claim this ancient and blood-stained borderland. The Serb once extended into the Hungarian plain on the north with the four rivers whose silver streams, *party-per-pale,* shine on the arms of the Magyar land. South, Serbs once stretched over the fertile lands of the South Balkans, on which Bulgars have encroached. All Serbs suffer from their mountain territory, as their higher illiteracy showed thirty years ago. They are certain to seek the lowlands whenever opportunity offers.

Europe is dotted with dubious bounds. Neufchatel, divided between Germany and Switzerland at the Congress of Paris in 1856, comes up for decision now. So do the boundaries of Holland and Belgium. Holland yielded to Prussia (map) and Belgium yielded to Holland. These were avowedly compromises. Towns in Neufchatel and Valengin have already annexed themselves to Switzerland, which declines the perilous gift. Belgian and Dutch papers in December were talking of war between the two countries. Neither England nor Belgium will ever again be willing to have the Scheldt held by the Netherlands, when it is the natural water-gate to Antwerp.

TRAINING HUMAN CAPACITIES FOR THE NEW ERA

BY HOLLIS GODFREY

(President of the Drexel Institute, Philadelphia)

[Dr. Godfrey's article is for thoughtful rather than superficial reading. It goes to the heart of our "Reconstruction" problems. High wages and short hours are desirable, but they must come by means of increased skill and training for results. When Dr. Godfrey talks about foremen and engineers and shopwork, he has also in mind the growth of skill in the farm community, in the office system, in the conduct of public schools, in the running of a religious society, in the practise of law and medicine, or in the handling of a city's police problems. The country's greatest asset is the moral and economic power of its people. With high training and good planning, material resources will respond to the demands of a richer civilization.

Dr. Hollis Godfrey is a distinguished engineer, President of the Drexel Institute of Philadelphia, who served as the engineering authority on the Council of National Defense at Washington for two years beginning in 1916. As a consulting engineer, an educator, and broad-minded leader, Dr. Godfrey promises to be one of the marked men of the new period upon which we are entering.—THE EDITOR.]

ON August 1, 1914, the peoples of the world were moving slowly but surely along the road of progress and achievement. Some were advancing more rapidly than others, but all were progressing along a road of peace. In medicine, in education, in public work, and in all practical applications of science, a worthy advance had been made and we were on the whole a distinctly happy and prosperous world. Suddenly, on August 1, the German Empire by declaring war on Russia drew most of the civilized world into a cataclysm of blood and dropped a wall across the old road of progress. Our advance along that road of peace was halted.

During the first year of the war, if you remember, we thought we could go back to the old road, but we could not. We never could have gone back after one day, but we continued to talk about going back. Every day, every month, and every year added to the impossibility of doing this, until, when the German fleet surrendered on November 22, 1918, anyone who talked about the possibility of going back to conditions before the war was simply indulging in a forlorn hope. The question now is: What road are we going to take in the period of reconstruction and readjustment which will enable us to meet the needs of the new situation?

If we go back all the way to the time when the Phœnician merchants first decided that they would sail out for new territory, or if we turn to the days of Elizabeth when Drake sailed to the new world, we see that whenever a nation has reached a point at which its problems are new—where the world itself is almost new—the nation has to master these problems or perish. This is equally true of an institution, an industry, or an individual. There is just one of two things to do—either drift or plan; and we are at this moment in a situation where as a nation, an institution, or an individual, a choice must be made.

The danger is that we shall wait too long before coming to a decision. As a nation we are still undecided. Just the other night in a little group of six who were talking with me, three said, "Let us wait until the League of Nations is established and President Wilson gets back. In the meantime, stand pat." Two of the other three said, "Plan." And one said, "Act to hold the best that we have and plan to make the most of what is to come." It is the third policy that is the right one to pursue to-day.

We must always assume that a large part of the world will drift and that another part will plan. This article is frankly only for those people who plan. Intelligent planning directed towards a given end means progress. We will simply discard drifting, because we are in a situation in which we must plan and progress, if we are to live. I firmly believe that there is sufficient evidence to indicate that the plant, institution, or individual that drifts the first two years of a critical period like this, will be dead or dying within a decade. That is why I believe that every

plant, every institution, and every single individual must spend every possible hour in new planning, holding as they do so to the best of the old.

Suppose we call that settled and assume that a plan is to be made. The question then is: How shall we plan and to what end? What can history tell us of the way to directed planning? If we go back again to England in the time of Elizabeth, we find the period in history which is, in my opinion, most like our own. The reign of Elizabeth faced, as the world faces to-day, the problem of social unrest. During the early years of the reign, England was outwardly at peace with the Continent. This gave opportunity for the study of domestic problems and for the formation of sound domestic policy. The opportunity was widely used. Old industries were revitalized, new industries were developed, and important improvements made in methods of cultivating the land.

This development of new capacities rather effectively took care of the problem of social unrest by providing employment and settling other vexing questions. But if conditions were not to become stagnant or worse and if the old evils were not to reappear, additional outlets had to be found for the newly developed national strength which expressed itself powerfully in commercial and industrial resourcefulness. These new outlets the shrewd merchants of England, especially of London and Bristol, were quick to find in foreign commerce and trade. Following the masterly example of Columbus and the Cabots, Drake and other great seamen of Elizabethan England were sent out to discover new worlds or to exploit those already known. Thus, when stagnation threatened them, did the merchants and seamen of England by developing at home and abroad new capacities, put English trade on a sound footing in their own day, and lay the foundation of their country's commercial supremacy and of her present vast Colonial Empire.

There is a lesson here for America. We cannot, nor need we copy many of the methods of Drake and his contemporaries. We require only their vision. They sought new capacities and it is in the development of new capacities that we must find the end of planning to-day.

Bringing Out Mental Capacity

We have a new and great opportunity for the development of capacities. We are interested not only in the development of material capacity, which was probably, despite the marvelous and perhaps accidental intellectual by-product of its work, the chief concern of the industrialism of this former age, but to-day we find in the development of the mental capacity of the worker our great new world. This we must do if we are to live as a nation and build a great new state.

To do this effectively or at all, we must take care of the mind of the buyer who buys the service and the mind of the worker who performs the service that is bought. The doer of the service can only work well when he knows that the product of his labor is fitted to an economic or spiritual need of a given time. There is no earthly use in training a maker of square pianos when the need of this product has disappeared. No matter how brilliantly it may be done, it is futile to train any engineer or craftsman for the solution of problems that do not exist or for tasks that need not be done, especially when all the training and development of capacity imaginable lies ready to our hand in the actual problems that must be solved and the actual tasks that must be done.

Lessons of the War

Time presses us heavily. We must get swift results at the minimum cost. A moment's thought on the history of the Great War will show us clearly what is really the swiftest way to get results. The whole war from August 1, 1914, to July 18, 1918, was an example of the hindrances, checks, and dangers of drifting or of action without complete planning. On July 18, 1918, under Marshal Foch, the tremendous force of action based on complete plan began to operate, and in four months the work was done which had not been done by four years of planless method. And be it noted, in tactics Foch made his gains (so most of the tacticians say) by the development of mental skill, which is the swiftest capacity development possible, taking into consideration total time involved in complete action.

When we remember the lessons of the war, the reason for placing the emphasis upon the development of mental rather than material capacities appears at once. We admit that mental capacities can be developed far more swiftly than material ones, but ask why they have not been more largely developed from the standpoint of their value as industrial capacities? For one reason and one only The means for their development industrially were not in existence in sufficient quantity to

make maximum development possible—exactly as advances in the art and practise of navigation have inevitably had to precede the development of the capacities of new lands.

Now for the first time the great war—by far the greatest engineering and educational experiment the world has ever known—has supplied us with the means for such development and, by focusing all the pre-war experience in engineering and education on the supreme need of winning the war and developing that knowledge in the hot crucible of war, it has supplied these means in the three great groups necessary for the development of complete industrial mental skill.

The Kind of Education Demanded

These groups point out (1) what knowledge is necessary—the knowledge basis of the development, (2) how that knowledge can be best and most simply taught—the expression basis of the development, and (3) what men are best fitted for a given job and how we can know when they are fitted—the test basis of the development. How all three means for the development of mental skill capacities can be used in a given specific case will be told later.

And there is a further reason why the next period is to be a great period of the development of mental skill. The war has changed the attitude of the people toward the nation. And new development cannot be individual. It must be pointed towards three ends—the development of a better state, a better opportunity for one's associates, and a better opportunity for one's self. No longer will plans headed for mere individual gains suffice.

But there is one point which any believer in my statements must not forget. Production must go on. Any development of capacities must be in addition to existing capacities and must not interfere with them. That is, he must remember that any development of new capacity must insure the keeping of all that is good in the old. In other words, I do not mean for a moment that we can go ahead and develop new capacity to a high point and let another perfectly good thing drop to a low point. Hold what you have and develop the new. Insure the old—promote the new.

And there was never a period in the history of the world when there was so attentive an ear to the theory, which is unquestionably correct, that the swift and profitable way to insure the old and promote the new is to insure the development of mental skill by education. A plea for education will be heard to-day by the vast audience of men who have come back from this war. It will be heard by the thousands of untrained individuals who went into the war and failed because they lacked training. And it will be heard by those who succeeded because of their training. They all have recognized in their work, whether it was on this side of the ocean or abroad, that the thing that is most profitable is education, and that education based on right knowledge and right methods brings the surest and swiftest results.

A Practical Program

Thus far we have been concerned with the theory of the need for development of as yet undeveloped capacities of mental skill. Let us now present the general statement of a specific plan for such development in one of a group of fields where such development is possible based on the results of war training. It is given in outline only, owing to space limitations. It has been, however, worked out and checked in detail.

It is in the engineering basis of capacity development, in the educational teaching of that basis and in the fitting of the man to his work that we find the greatest field for meeting the pressing problems of to-day. But to make this theory work, it must be brought down to earth. Dreams and theories are necessary, but to make them work for men and women to-day and not to-morrow, we must have a plan on which any man anywhere can *act*.

The plan proposed is fundamental, first, in its division into two types of skill—mental skill and manual skill, or technical skill and vocational skill, or engineering skill and craftsman skill, in whatever way we choose to express the comparison. If it is a problem of hand working on material, it is a craftsman problem, no matter how guided by the brain. If it is a coördination of plans by which the work of men on material is planned by the brain, it is a technical problem. A craftsman works only with the material at his hand; an engineer works with the design of that combination of goods and services which makes a finished product through existing or new avenues of industry.

The engineer is the man or woman who organizes men and materials in groups of men and groups of material, produces the assembly drawing, showing what is to be made, the bills of materials showing what is to be used, the instruction card telling how

the work is to be done and by whom. The engineer must visualize his complete work with relation to the whole factory which makes the product and with regard to the buyer who is to use it. In the making of a given product, engineering and craftsman skill both have a definite and valuable part. One is as important as the other, but this does not lessen the necessity for correct definition as to the purposes of our plan.

Engineering training has been steadily undergoing a process of definition for the last fifty years or more, and the boy who wishes to become an engineer has a large group of splendid engineering schools from which to choose the one which best meets his special needs. Vocational training which will give the citizen command of a trade or craft is recognized by city, State, and nation as the right of any citizen and a multitude of great vocational schools exist.

"The Non-Com. of Industry"

But industry has a third type of worker whose task has been little defined, whose schools are few, indeed, and yet whose mental capacity is capable of the most extraordinary advance. There is no other type in industry to-day whose development will bring greater rewards to all concerned, to capital, to labor, and the community alike. I refer to the foreman (call him by any name you please—leading man, inspector, route man, boss), the non-commissioned officer of industry.

The foreman is primarily a community officer of an industrial community. He is the route man who makes the route by which the goods travel, and he is the Public Works Department who keeps the shop clean. He is the public school teacher who teaches the citizens of his part of the community how to live and work effectively in that community. He is a public servant who, if he rightly performs his function, is not concerned with controversies between employer and employee, being detached from both in any discussion and with his work not involved in any problems which give rise to differences of opinion.

There is nothing that will do more in this period to aid in the development of both material and mental capacity than the giving to the craftsman the training which a non-commissioned officer of industry should have, and to existing non-commissioned officers of industry training for advancement in their own jobs or preparing them for the commissioned jobs of the engineer. "A squad is no better than its corporal," said a great general. We may paraphrase the remark by saying, "A group of workers is no better than its foreman." And (let me repeat) the remarkable part of the whole thing is that with a proper functionalization of the foreman's job, all his gain in mental skill aids the advance of industry without interfering or blocking or even entering any of the controversial fields in which are fought out the differences between capital and labor.

I have defined the foreman's job at some length because I do not think that there is anything in industry which has made more delay, has cost more in money and time than the lack of realization that the moment a man becomes a non-commissioned officer, he undertakes a technical task and, if he does his job rightly and is allowed to do it, never does a single piece of craftsman's work while working as a foreman. He organizes men and materials. He is essentially sub-engineer in charge of the execution of the engineer's design, but he has not heretofore been trained as an engineer.

The fact is that the non-commissioned officer of industry assimilates the assembled drawing of the engineer and carries out a detailed drawing in terms of the men and materials. Here is a great human need that must be filled if industry is to advance and to fill that need we must train rightly a new group who have never been properly trained before. Only by providing that training can we fill in a link in industry and serve to the maximum degree the nation, our associates and ourselves. The world is too complex and too large to say this is the only way out or to say that good training has not been obtained in a few cases. There is no panacea; there is no cure-all. But there is a general need in every industrial city and town everywhere for trained foremen, and no proper means of supplying that need.

A Basis of Experience

When any man makes as strong a statement as that just made, I like to know why he says it and what experience he has had to back it up. I want to go back and give the reader a little of the personal history on this matter which has led me to these conclusions. In 1899 I took a class in an evening school which was made up chiefly of foremen, subforemen and inspectors. It was concerned with elementary mechanics and the principles of physics, although it became almost from the start a course in the theory and

practice of foremanship, because of an almost accidental happening. The first night I went in (I was recently out of college and had recently worked my way through the shop) I knew by experience that my students could ask me any number of things that I could not answer. I evolved in the spirit of self-protection, a scheme for meeting trouble. I said to them, "You can ask me a lot of things that I cannot answer, but there is nothing you can ask me that I cannot find out. Ask me any question and I will answer it on the second class night following. I will answer nothing on the night it is asked."

I kept that question-and-answer plan going for six years and during that time I believe I had asked me almost every fundamental question of foremanship. And as the years went on, I was able to check their questions and answers by my actual experience in industry. Nine years of experience in industry passed by and an opportunity of administering the affairs of another night school came. So for five years in the Drexel Institute I have been watching the foreman situation with the utmost interest, especially in view of my opportunity to check the situation at Washington during the whole of the war.

I served in the government service for two and one-quarter years, during which time I had one industrial and institutional problem after another of all sizes and kinds presented to me. Over and over again I found this to be true—that the great crying need was for non-commissioned officers of industry. There were craftsmen, and manual workers and engineers, but there were no foremen—none who could take the plans from the engineer and put them through. The question I was asked again and again was this: "What are we going to do about foremen and where can we get them?" So after study both from the side of the employer and from the side of the employee, I came to the very definite determination that the non-commissioned officer's field is separate from that of the craftsman on the one hand and from that of the engineer on the other.

When the war came to the United States what I had foreseen took place. No one who had any part in the industrial development of the war can forget the desperate lack of trained non-commissioned officers, industrial and military, which cost so dearly in time and money. The need was shown with a clearness never equalled. But the military requirement brought great advances in the power to meet the need in this period of reconstruction. France outlined with a beautiful clarity the problem method of intensive training, Great Britain developed the theory of the vestibule shop, the United States developed the theory of maximum training devoted to a given end in a minimum time, and every theory, to name but a few of the great developments of mental and manual capacity of the war, was checked in thousands of cases by the grim and relentless test of war. In four years the world made and tested out an amazing number of possibilities for the development of capacities, which are only waiting the next stage, the change to peace, to become available for industry, and in few of these fields are greater opportunities of proved value at hand than in that of which I write to-day.

But every one of these fields must be carried out with two points of view: the making of a skilled citizen out of an unskilled citizen and the making of a skilled worker out of an unskilled worker. No work is complete which does not include the great factor of citizenship and an understanding of the citizen's place in the community.

Now there is nothing finer than the foreman group of industry. The way they have developed their job under adverse circumstances elicits my warmest admiration. Why not give them an open road to advancement instead of leaving it to chance which so often leads into a blind alley?

Machinery for Training

It remains, therefore, to outline specifically a plan by which the foreman may get that training which he needs. The first thing to do, is to bring the educational experience of the war to bear directly upon the problem. As stated above, we can in this way ascertain:

(1) What knowledge is necessary;

(2) How that knowledge can be best and most simply taught;

(3) What men are best fitted for a given job and how we can know when they are fitted.

There now exists ample machinery for ascertaining each of these three things, which, if focussed and centered upon the foreman, will give him the right training to perform his job.

There are two types of workers in industry who are especially eligible for this training, but they must be taught in two separate groups, the first composed of skilled craftsmen, the second composed of men who are already foremen. The skilled craftsman

must be educated in foremanship; the foreman must be trained for advancement in his existing job or for promotion to higher jobs, the craftsman who possesses the qualities and knowledge which fit him for advancement must have the training which will enable him to change from a manual worker to a mental worker. When that training is done, the worker, having mastered the principles of his technical work, should be competent to be a foreman in any department of the trade group to which he belongs—mechanic trades, ship trades, carpenter trades and the various like occupations.

The non-commissioned officer who is already working at his job must be taught enough of the fundamental principles to work up so far as possible what he has not obtained by practice, but he must be taught in the main by reference to the specific problems of his own shop and his own department and by the material and men that he has to use to get his work accomplished. When that training is completed, the non-commissioned officer should be a far abler officer, should be worth more money to his employer and himself and should be in the line of advancement.

Comparatively Brief Time Required

The procedure for actually putting this training for non-commissioned officers into effect, I have found by actual practice to be simpler than it may appear from the gravity of the general problem. The time in which the training may be done in the first group has been determined by a number of experiments as about four hundred hours, which can easily be taken in a year of night-school study with employment continuing regularly during the day. The time necessary for the training of the second group is probably materially shorter, but how much shorter is not yet known.

It has been found by the experience of the war that the problem method of instruction when rightly done is so fascinating to the student that the work offers its own incentive as well as the reward of money and advancement at the end. And, perhaps best of all, it is possible practically to eliminate any hour of instruction which does not lead straightway to the making of a more skilled citizen. The cost can be estimated with a considerable amount of precision from known factors.

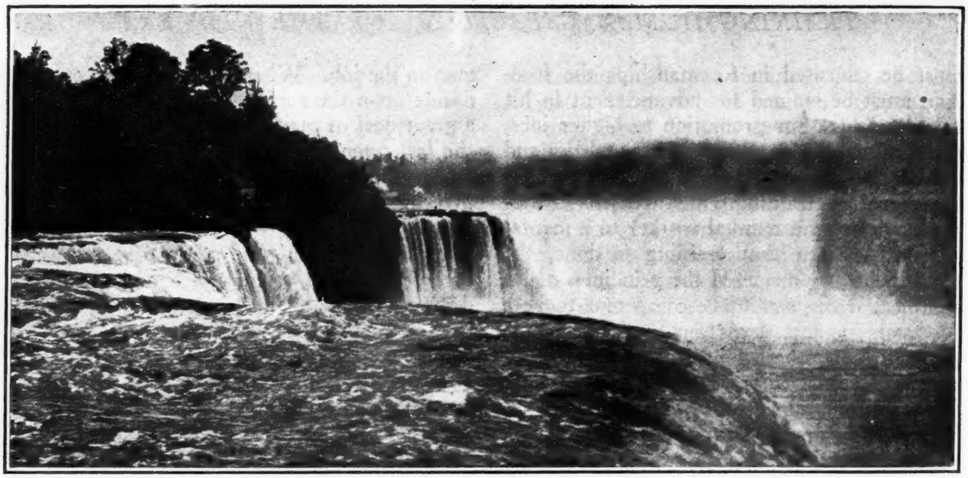
The length of the period of training, therefore, presents no serious difficulties. Nor does the problem of testing—the fitting the man to the job. When, however, we come to decide upon the subject-matter of the course, a great deal of serious thought is needed. In the last twenty years I have worked out and am now making available for our own classes investigations which are basic to the solution of this problem in both the school and the shop. In addition, the great new resources of technical and vocational teaching may be drawn upon.

Engineers Who Are Also Teachers

With a command of industrial practice as it has been focused by the war, the engineer experienced in shop practice who is skilled also in teaching (and admirable men of this type exist) will be able to give the craftsman that training which will most quickly make him an efficient foreman. If this same engineer is also an expert in engineering research, he will be able to point the way for the education and advancement of the existing foremen. But he cannot develop the educational capacity of existing foremen in terms of their own shop in public institutions devoted to general aims. He must do it in the shop, and develop the work as an outside teacher and investigator. The work should never be put into hands that are concerned with other duties nor into the hands of any one who is not both teacher and engineer.

Merits of the Plan Summarized

So I commend the examination of this vital problem to those engineers who are teachers, to every foreman, and to every worker who desires to fit himself to be a foreman, to all employers and employees, and to all men and women everywhere—all who are interested in planning a way by which all in common may advance and none may lose, during the building of that great new state which should be brought forth after the travails of war. For search as I may, I can find no way in which any citizen can suffer loss in the development of this plan, if the plan can be carried out according to design, because the employer gets a foreman who understands foremanship, the engineer gets a man who can read and interpret his designs, the craftsman acquires a fundamental knowledge of his job with a chance to become a foreman, the non-commissioned officer of industry gets an insight into the work of the engineer which may advance him to that position, the men in the shop get a square deal, and the community gets skilled citizenship.



© Underwood & Underwood, N. Y.

NATURE'S POWER SUPPLY FOR OBTAINING NITRIC ACID

(If nitrogen is to be reduced directly from the air in solid usable form, cheap waterpower is necessary. At Niagara Falls—shown in the picture above—the first experiments were made with the object of burning nitrogen electrically and of obtaining ultimately nitric acid. Niagara's power was not cheap enough, and that was before the present legislative restrictions on its use were imposed. The industry throve in Norway and Sweden)

THE CHEMIST AND THE FOOD PROBLEM

SOLVING THE PROBLEM OF AN INCREASING POPULATION AND A DIMINISHING FOOD SUPPLY

BY WALDEMAR KAEMPFFERT

(Editor of the Popular Science Monthly)

WE paid no great attention to our utter dependency on the nitrogen of the air until in 1898 Sir William Crookes, in a memorable paper read before the British Association for the Advancement of Science, showed that the population of the world is increasing more rapidly than its food supply. Wheat eaters dominate the world. In 1898 they numbered 516,000,000, and they were increasing at the rate of 6,000,000 annually. By 1945 the wheat fields must cover 292,000,000 acres in order to feed a population of 834,000,000, he argued, and then dramatically asked: "What is to happen if the present rate of population be maintained and if arable areas of sufficient extent cannot be adapted and made contributory to the subsistence of so great a host? If bread fails, not only us, but all the bread winners of the world, what are we to do?"

For years the farmers of the eastern and western hemispheres have been growing more wheat than Sir William pessimistically concluded it would be difficult to supply in 1941. Although his dismal prophecy is not likely to be fulfilled, chiefly because he made no allowances for the use of better agricultural machinery, better tillage, better varieties of wheat, and better seed, it served the useful purpose of arousing newspaper editors, government officials, capitalists and chemists to a realization of our food problem.

Sir William harped on the need of nitrogen. Without it we cannot grow wheat, without it plants cannot grow, and if plants cannot grow cattle must starve, and with them mankind. But what is nitrogen? Where can it be obtained? How is it used?

NITROGEN, NITROGEN EVERYWHERE, BUT NOT AN OUNCE THAT YOU CAN USE

Breathe and you inhale nitrogen. Eighty per cent. of the air is composed of it. Without it you die. Pure oxygen may not be breathed indefinitely with safety; it would burn you up before your time. Nitrogen serves to dilute it. Eat bread, meat, beans, or any tissue-building food, and you eat

nitrogen. Blast a subway, blow up a Czar, destroy a fort with explosive shells, drop bombs on a munitions factory from an airplane, and you accomplish your purpose with nitrogen. Poison a rat and you will find nitrogen your deadliest instrumentality. Dye a fabric one of a hundred different shades and you must fall back on nitrogen. Dissolve gold out of the rock in which it is locked and you will find that nitrogen proves indispensable.

Every twenty-four hours you draw into your lungs four hundred and fifty gallons of it, enough to make thirty pounds of T. N. T. or forty pounds of gunpowder. The nitrogen above one square mile of the earth amounts to about twenty million tons—enough to last the world for fifty years. Of this enormous volume a minute fraction—about 0.000002—is in the the active service of the vegetable and animal kingdom.

Plentiful as it is, nitrogen as a free gas has not many industrial uses. It must be converted into solid, assimilable form. Most elements are readily converted into useful compounds. Hydrogen and oxygen combine to form water; chlorine and hydrogen to produce hydrochloric acid; sodium and chlorine to yield common table salt. But this gas nitrogen is chemically rebellious, extraordinarily inert.

Barnyard manure and other animal fertilizers contain nitrogen in the very chemical form that the soil demands. For centuries farmers have been manuring their fields. They never knew why until the modern chemist told them that they were merely restoring to the soil a fraction of what had been removed from it by crops and cattle. Whenever we kill a steer or a sheep we kill a crop producer.

There is not enough animal fertilizer to restore to the soil the nitrogen that has been removed by growing verdage and grazing cow. Is there no artificial form of assimilable nitrogen? The chemist points at once to ammonia, a nitrogenous by-product obtained in the manufacture of illuminating gas and of coke. For years farmers have been fertilizing the soil with ammonia, not the strong liquid household variety, but solid ammonium sulphate. The amount of ammonia sold by all the illuminating gas-works in the country is negligibly small in comparison with the demands for fertilizer. Far greater is the quantity obtained when soft coal is reduced to coke in an oven.

By the end of the war Germany was recovering fully one-third of her nitrogen in the form of coke-oven ammonia. The United States, on the other hand, still wastes most of the ammonia which it might similarly husband. Why? Because it employs the wrong kind of oven for the most part. Instead of collecting the fertilizing values which are absolutely vital to us, we allow most of them to float off into the atmosphere. The man who lights cigars with one hundred-dollar bills popularly symbolizes recklessness. He is totally eclipsed by our coke companies. They toss millions into the air where he consumes but paltry hundreds.

But, granting that much valuable ammonium sulphate might be obtained if the right kind of coke-oven were generally adopted, there would be no assurance of a steady supply. Coke-oven ammonia is a kind of waste, a by-product. No sane business man would coke soft-coal for the sake of obtaining ammonia. He produces coke only when the iron industry demands it, and the iron industry's demands vary from year to year.

CHILE'S PRICELESS NITRATE FIELD

(The power of waging war, the power of producing crops to feed a whole population, the power of developing essential industries have hitherto been dependent upon the millions of tons of nitrogen deposited in the form of nitrate of soda behind a Chilean plateau five thousand feet above the sea-level and twenty miles from the Pacific coast—a dreary, parched, almost rainless strip of land, a veritable desert, but a great national asset)

THE FLAME OF A 400-KILOWATT OVEN

(Whenever lightning flashes nature is fixing atmospheric nitrogen. So the scientists have imitated her by developing methods of applying electricity. Here is a typical arc furnace which burns the air to produce nitric oxide, from which nitric acid is obtained, which in turn can be changed into solid nitrate)

CHILE'S PRICELESS DESERT

Luckily for mankind, nature deposited millions of tons of nitrogen in the form of Chilean saltpeter (nitrate of soda) behind a plateau five thousand feet above the sea level, and twenty miles from the Pacific Coast—a dreary, parched, almost rainless strip of land, a veritable desert. For nearly a century that Chilean waste has been a priceless possession of civilzation. It has stood between us and starvation. Upon it the farmers of Europe and America have been almost entirely dependent for nearly a century, and with them a host of industries as well as grasping empires that have expanded their dominions by means of gunpowder, nitroglycerine and T. N. T.

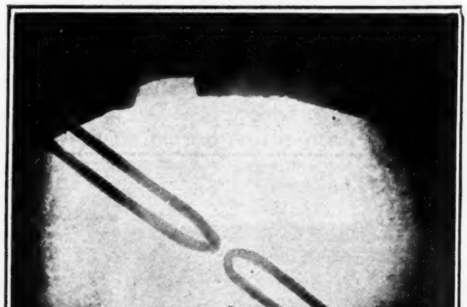
The power of waging war, the power of producing crops to feed a whole population, the power of developing essential industries, have all been dependent on Chile. What would happen if the ports of that country were blockaded? The great German chemist, Ostwald, wrote some years before the European conflict: "If to-day a great war should break out between two great powers, of which one were to prevent the export of saltpeter from the few ports of Chile, it would thereby make it impossible for the enemy to continue longer than its ammunition supply would last." No wonder that Germany had accumulated approximately six hundred and sixty thousand tons of Chilean saltpeter and that it threw its spiked helmet up with joy when it captured two hundred thousand tons more in Antwerp.

Chile practically lives on her nitrate. She levies an export tax of $11.60 on every ton exported. She has collected from the United States alone about ninety million dollars. Between 1867 and 1916 we used about 8,040,217 tons, costing $261,999,000. Our importations in 1913 amounted to 625,000 tons, valued at $21,630,000. Whenever you eat a piece of bread rest assured that you have paid your share of Chile's tax.

ONLY THE AIR CAN HELP US

The Chilean nitrate beds are not inexhaustible. Some time in the present century all their nitrogen will have been mined. Unless some cheap way of reducing the free nitrogen of the air to solid form is invented the world must starve.

Every tree in the forest, every wild plant, must assimilate nitrogen from the soil. How did nature place it there in exactly the right chemical combination? Hers is a very slow process. She snaps her fingers at time. A million years is to her what a second is to us. Whenever lightning flashes, nature is fixing atmospheric nitrogen. A black cloud looms up on the horizon. The sultry air is charged with electricity. Suddenly there comes a blinding flash. A huge electric spark has fixed a scarcely measurable amount

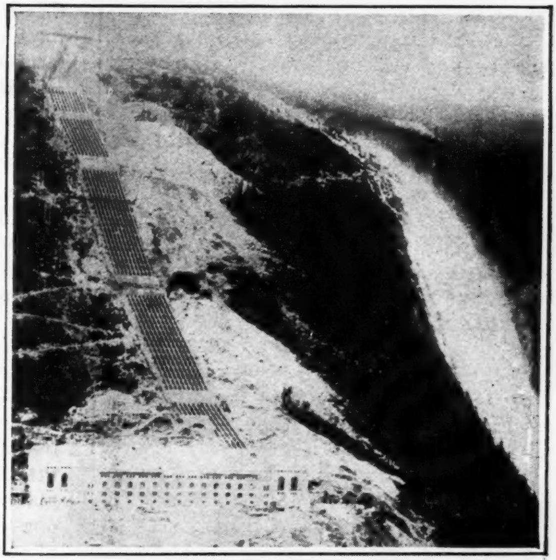


BIRKELAND-EYDE ELECTRIC ARC

(Prof. Kristian Birkeland and Dr. Samuel Eyde were the first to succeed commercially in making nitric acid from the nitrogen of the air. They used an electric arc, which, by means of a magnet, they spread out until it was bigger than a cart-wheel)

of nitrogen, and the rain has conveyed it to the earth below. Millions, possibly billions, of such storms in primeval ages, helped to furnish the earth with the nitrogen that it now yields to green leaves and forest animals.

One way of fixing nitrogen is to imitate nature. So, the scientists have developed methods of applying electricity. How does the lightning flash reduce the nitrogen? The laboratory answers. It is not the electricity that overcomes the inertness of the gas, but the heat generated by the lightning flash. Nitrogen must be burned. That is one way of fixing it. But the heat required is so intense, measured as it is by thousands of degrees, that only electricity can generate it.



Photograph from E. I. du Pont de Nemours & Co.

THE FAMOUS RJUKAN FALLS NITRATE PLANT, IN NORWAY

(The cheapest water power in the world is to be found in Norway and Sweden; hence they are the only countries in which a commercially successful electric nitrate industry has been developed. The illustration shows how the water is brought from above the falls, through ten five-foot pipe lines, to the power house. The water spins a turbine, which drives an electric generator. Intense heat is thus developed, and air is burned, according to the Birkeland-Eyde process, to obtain nitric oxide)

LIGHTNING IN THE FACTORY

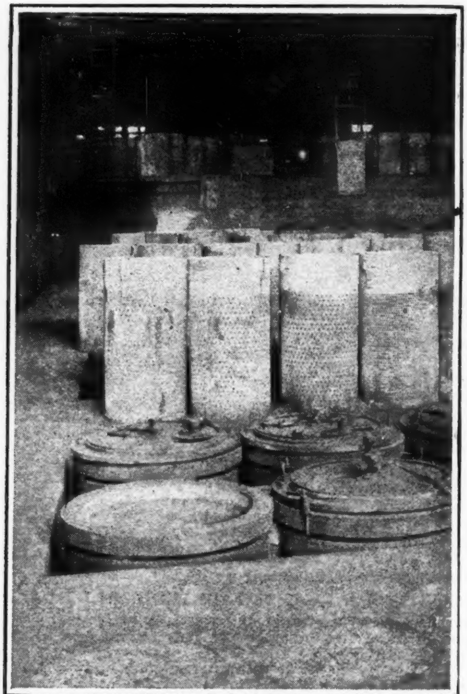
What is wanted, then, is a continuous, artificial thunderstorm, something that lasts not for a fraction of a second but for hours and even days, something in the nature of an electric furnace so designed that it burns air and with it nitrogen, in enormous quantities. Nitric oxide is the name given to this burned nitrogen. With the aid of water it can be transformed into nitric acid, which in turn can be changed into a solid nitrate upon which a plant can feed.

The whole problem of reducing nitrogen electrically resolves itself into the burning of as much air as possible in a given time. Bradley and Lovejoy, two Americans who made the first commercial experiments, employed an apparatus in which four hundred and fourteen thousand sparks—miniature lightning flashes—crackled every minute. Professor Kristian Bjrkeland and Dr. Samuel Eyde, of Norway, who followed them, used an electric arc, which, by means of a magnet, they spread out until it was bigger than a cartwheel. Two Germans, Schönherr and Hessberger thought that it would be better to use an electric arc which would be very long (from sixteen to twenty-three feet) and around which air whirls. Pauling invented the fan-shaped arc flame. E. Kilburn Scott, an English experimenter, advocates a conical furnace at the bottom or apex end of which the air enters, to pass through an arc flame whirling around fifty times a minute, and to emerge at the wide top of the cone as nitric oxide.

It is clear that all these engineers follow the same principle. Their inventions differ from one another only in the method adopted of obtaining a large heating surface and of feeding to that surface a huge volume of air in a given time.

At best, only a very little nitrogen is fixed in the form of nitric oxide—scarcely as much as 2 per cent. Although the air costs nothing, the power required to generate the intense heat must be extraordinarily cheap. Enormous quantities of current are consumed by the furnaces. To generate these currents by means of the steam engine and dynamo is ruinously expensive. Hence the electric nitrate plant is always built near a swift stream or a waterfall, the power of which spins a water-turbine, which, in turn, drives an electric generator. The cheapest water power in the world is to be found in Norway and Sweden. Hence Norway and Sweden are the only countries in which a commercially successful electric nitrate industry has been developed.

Nitric acid is the ultimate main product of a plant in which air is electrically burned to fix nitrogen. In time of war the demand for nitric acid is enormous; without it ex-



A GLIMPSE OF THE OVEN-ROOM IN THE GREAT NIAGARA FALLS PLANT, WHERE CYANAMID IS MADE

(There are fourteen cyanamid factories in the world)

plosives cannot be made. But in time of peace there is a different story to tell. Nitric acid cannot be easily and safely transported. The Norwegian companies have been obliged to install large ammonia producing plants in order to convert their nitric acid to ammonium nitrate. The best informed chemists and engineers are agreed that the Norwegian process cannot be profitably introduced into the United States by any firm which is not directly interested in the manufacture of explosives from nitric acid or of celluloid and similar nitrocellulose products. Our waterpower is too expensive because of the legislative restrictions imposed on its use; and that waterpower is not to be found in regions where nitric acid is utilized in large quantities.

CYANAMID APPEARS

Two German chemists, Professor Adolph Frank and Dr. Nicodem Caro approached the nitrogen problem from a different angle. They thought that it might be practicable to discover some substance which would absorb nitrogen and combine with it if the proper chemical conditions were provided. In 1898 they succeeded in producing an entirely new form of fixed nitrogen—a new chemical, in fact—which they called calcium cyanamid and which proved to be an excellent fertilizer. About one million tons of cyanamid were produced in 1916 by fourteen factories located in Norway, Sweden, Italy, France, Switzerland, Germany, Austria, Japan, and Canada.

And how is cyanamid made? Here is an electric furnace. A dazzling white flame bridges two electrodes. Its temperature is 6000 degrees Fahrenheit. In that terrific heat lime (calcium) and coke (carbon) are fused together. Every quarter of an hour the furnace is tapped. What is this white hot mass which pours out into the waiting iron car and which is so blindingly dazzling that it can be gazed at only through colored glasses? Calcium carbide, familiar to everyone who has ever used it for the generation of acetylene gas. It has a strange affinity for nitrogen at high temperature. The carbide is powdered and then heated to redness in huge ovens that look like drums.

But where is the nitrogen? It is obtained from liquid air—air liquefied by chilling it to 380 degrees below zero. That liquid air is composed of four-fifths nitrogen and one-fifth oxygen. The atmosphere is so hot in comparison with it that the liquid air boils like water on a stove. Pure nitrogen bubbles off first. It is carefully collected and forced into the drum-shaped ovens containing the white-hot powdered carbide. The carbide sucks up the nitrogen eagerly. A product not found in nature is obtained—calcium cyanamid. Cooled, ground and otherwise treated, it becomes a fertilizer. From it ammonia, nitric acid, and other useful nitrogen compounds can be obtained by suitable chemical methods.

Since the cyanamid process, like the Norwegian arc process, is dependent on electrical heat, why has it been so successful? Because it consumes less electricity, even though two electric heatings are required. Every one of the raw materials must be purchased in the market and transported to the plant and manufactured. Yet the cyanamid process is the cheapest in actual commercial use. It is one that the United States Government adopted for the Muscle Shoals plant now in course of construction.

So far as we may determine from the statistics published before the war, about two-thirds of the world's artificially fixed nitrogen is made by the cyanamid process and only

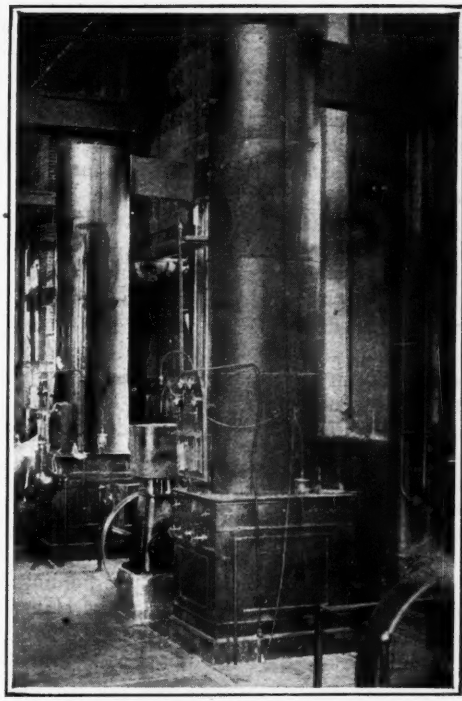
one-third by the arc process. According to the latest reports, the German production by the cyanamid process was raised from sixty thousand tons in August, 1914, to six hundred thousand in 1916.

HABER AND HIS CHEMICAL MAILED FIST

The war found Germany in a perilous position, so far as nitrogen was concerned. Without explosives she could not hope to win, and without some way of fixing nitrogen she could neither make explosives nor fertilize her soil to grow the crops that her hungry people were demanding. She was spending one million dollars a day to produce one and one-third million pounds of powder containing about five hundred thousand pounds of nitrogen. Her thirty million dollar hoard of Chilean nitrate could not last long. Had it not been for her chemists she would have been compelled to surrender in less than six months. They meant more to her than all her Ludendorffs and von Hindenburgs.

It happened that before the war Fritz Haber, a chemist who was financed by one of the richest German chemical companies, had evolved what may be designated as the most violent method ever conceived to fix nitrogen in a usable form. He adopted mailed-fist methods. No soldier that ever charged a machine-gun was braver than Haber. He and his assistants must have taken their lives in their hands time and time again before they were able to announce that at last they had succeeded. The men who work in a nitroglycerine factory follow no more hazardous vocation than the trained chemists who are indispensable in a Haber plant. It cost millions to develop the process; but it made Germany independent of Chile and of Norway, and it gave her a new industry.

Haber wanted to make ammonia—a particularly useful compound, because it can be converted into solid ammonium sulphate to take the place of Chilean saltpeter in agriculture or changed into nitric acid without which explosives cannot be made. Metaphorically speaking, Haber seems to have banged the laboratory table and to have sworn that he would make nitrogen do what he expected of it. He squeezes nitrogen and hydrogen in a tank. The pressure is enormous—2600 pounds to the square inch. The pressure is accompanied by the development of great heat (1000 degrees Fahrenheit), which facilitates the process.



A LIQUID AIR PLANT—AN ESSENTIAL ELEMENT OF EVERY CYANAMID FACTORY

(The nitrogen is obtained by distilling it from liquid air. This is a portion of the immense plant of the American Cyanamid Company at Niagara Falls)

The forcible squeezing and the attendant heating occur in the presence of what is called a catalyst, which is a substance that induces chemical action to take place without in itself undergoing any change. A catalyst is a kind of chemical field marshal. It gives orders that two elements shall combine, and after they have combined, just as if they were two regiments of soldiers, the field marshal catalyst is able to give more orders of the same kind. It always remains the same imperturbable commander. Unless it is present to give its chemical orders, nothing happens. The most familiar example of a catalyst is the piece of spongy platinum, which, when held over a gas burner, causes the gas to ignite. Haber's catalyst is probably some form of iron.

THE PERILS OF THE HABER PROCESS

A Haber plant is about as dangerous as a dug-out on the battlefield. It is enclosed in a bomb-proof shelter. Dozens of ingenious alarms are installed to warn of approaching danger. If the slightest trace of oxygen or air finds its way into the compression

chamber the result is a terrific explosion. Hence oxygen alarms are found everywhere. Yet despite these dangers, despite the great technical skill required to carry out the process—a skill so great that the huge German company which developed the process would probably be crippled if its force of experts were suddenly to leave—the Haber process is a commercial reality. It will probably compete with Chilean nitrate, and for that matter with every other form of fixed nitrogen in the world, after the treaty of peace is signed.

The first Haber plant, erected in 1913, had a capacity of thirty thousand tons of ammonium sulphate a year. By 1918 Germany was producing five hundred thousand tons by the Haber process—a mere guess. The German company with the aid of which the process was brought to commercial perfection had financed the Norwegian company that owned the Birkeland-Eyde process. It is significant that the Norwegian holdings were sold soon after the success of the Haber process was assured.

Other nations have attempted to fix nitrogen by the Haber process, but not one has succeeded commercially, partly because the veil of secrecy that was thrown around the technic has never been lifted, partly because only workmen of rare skill can be employed. Workmen? They are in truth chemists—doctors of philosophy. Only Germany has enough of them at her command, most of them paid less than a machine-tool operator in an American automobile factory.

WHY DIDN'T WE THINK OF THIS BEFORE?

Now comes an American chemist, Professor Bucher of Brown University, who calls attention to an old process which is the simplest of all and which bids fair to win a place for itself because it is not dangerous, because it requires no great pressure or power and because it can be carried out by ordinary factory workmen properly supervised.

As far back as 1839, an Englishman, Lewis Thompson, made a mixture of powdered pearl-ash, coke, and iron, and heated it in a crucible. He obtained potassium cyanide (a form of fixed nitrogen). Thompson noted that the process must be carried out in the presence of iron, even though the iron itself remained unchanged. Chemists knew nothing of catalysts in 1839. Iron was evidently a necessary catalyst in the process. Both in England and on the continent companies tried to fix nitrogen in the form of cyanide, according to Thompson's directions. They failed chiefly because of the difficulty of obtaining suitable apparatus.

Modern chemist as he is, Professor Bucher realized that the iron was a catalyst. He mixes soda ash, powdered coke, and powdered iron together, heats the mixture moderately; and blows nitrogen over it. That is all. Sodium cyanide, a fixed nitrogen, is obtained. There need be no alarming outlay for power or for costly furnaces and materials. The plant can be built anywhere. Think what that means in a vast country like ours, where the cost of transportation may be so high that a farmer cannot afford to buy fertilizer, cheap though it may be at some distant waterfall.

Blow steam on the sodium cyanide, and you obtain sodium formate and ammonia. Give the chemist ammonia, and he in turn will give you nitric acid or fertilizer or any nitrogen compound that you may need in your factory.

But Dr. Bucher goes even farther. He leads a little waste gas (carbon dioxide) from his furnace to his sodium cyanide. A magical change takes place. He has urea, which is three times richer in nitrogen than Chilean saltpeter and twice as rich as the ammonium sulphate that farmers indirectly buy from coke-oven companies. By another process he can obtain oxamid from his sodium cyanide, oxamid being a fertilizer that is not easily washed away by rains because it does not readily dissolve in water. No one ever thought of growing wheat with the aid of urea or oxamid. Now it seems they can be made so cheaply that they may become as common as other fertilizers.

Sometimes we gasp at the miracles wrought by the chemist. Perhaps we ought to marvel at his blindness. For forty years he has been trying to convert the gaseous nitrogen of the air into a useful solid. He harnesses waterfalls; he risks his life by experimenting with enormous pressures. And all the while he might have made what he wanted from such plentiful and cheap materials as coal, iron, soda and air.

Professor Bucher would be the last to claim any great originality for his work. Indeed, one of the great industrial air-liquefying companies had long been developing the Jacobs process, which is also based on Thompson's forgotten researches. Two experimental plants are in operation. Engineering problems must be solved, but problems not nearly so difficult as those which

confronted Haber, for example. Between 1844 and 1847 efforts were made to commercialize Thompson's old process. Mechanical difficulties were encountered, the most formidable of which was the inability to secure a suitable retort that would withstand the corrosive action of the furnace charge. The United States Government itself has taken a fatherly interest in the process, which speaks for itself. Thus, Dr. Parsons, who was sent abroad by the Government to study nitrogen fixation, states that in the cyanide form "nitrogen will be fixed . . . cheaper than by any other known synthetic process."

The war has spurred us to take heed of our nitrogen needs. Out of all the blood and ruin there rises the certainty that although land is becoming scarcer and scarcer, the human race will not lack for enough fertilizer to grow its food.

But nitrogen is not only a fertilizer. It is a labor saver. It enables a farmer to grow more crops to the acre with less effort. Europe's example proves the point. Before the war Belgium produced more wheat to the acre than any other country in the world. Why? Because she used the most nitrogen —495 pounds to the cultivated acre. Germany followed with the next largest yield. Why? Because she used the next largest amount of nitrogen to the acre—207 pounds. All other European countries fall behind Belgium and Germany. Germany with only one-fifth of the United States' cultivated acreage uses 40 per cent. more fertilizer. Belgium raises thirty-seven bushels of wheat to the acre; Germany nearly thirty-one. And we? About fourteen and a half. The same inequality is to be found in the production of rye, oats and potatoes.

Germany is smaller than Texas; yet she uses seven times as much fertilizer as the whole United States. In twenty years Germany increased her yield of grain crops fifteen bushels to the acre; the United States only three bushels. Her potato crop has been increased eighty bushels; ours twenty-four bushels. In general, Germany's crop yields are approximately 80 per cent. greater to the acre than ours. The German farmer, like every other farmer in the world, pays no particular heed to governmental instruction. He uses fertilizer, not because his government wants him to do so, but because it pays him to do so. The net profit varies from 100 to 200 per cent. on the investment.

WHAT IS THE UNITED STATES DOING?

When we consider what nitrogen has done for Europe and above all for the most formidable enemy that we have ever fought, we ask: What is our Government doing?

Aroused to our utter dependency on Chilean nitrate for the manufacture of fertilizers and explosives, Congress appropriated the ridiculously inadequate sum of $20,000,000 for the erection of nitrate plants. All the processes described in the article were either to be experimented with or carried out on a commercial scale. Then came the armistice. Work on the government plants has practically stopped. The only appropriations asked for are to be applied in paying caretakers of buildings. Despite Europe's example, experts are to be appointed for the purpose of determining whether the work of fixing nitrogen, as a government enterprise, shall go on or whether the plants shall be salvaged.

Surely we have a lesson to learn in the United States. Ten billion dollars a year is the total of our annual food bill. Ninety per cent. of the families in the country spend 40 per cent. of their income to eat and live. Getting food is the chief occupation of mankind. Yet land is becoming scarcer and scarcer. The area of improved soil increased by an average of 31 per cent. per decade from 1870 to 1900, but only 15 per cent. from 1900 to 1910. During the period from 1900 to 1910 the population of the United States increased 21 per cent., but the crop production increased only 10 per cent.

If food is to be cheapened, we must grow more crops to the acre, without an increase in labor. This means cheap agricultural fertilizers; and cheap agricultural fertilizers are in turn dependent on a cheap way of fixing the nitrogen of the air.

AN APOSTLE OF GOOD ROADS, LOGAN WALLER PAGE

BY JOHN M. GOODELL

TWENTY-FIVE years ago the American country road rambled over the wooded hills, slouching along winding, level courses until it was absolutely necessary to cross a divide, and then rushing up the hillside in such a way as to finish the climb as quickly as possible. Or, out on the prairie, it followed section lines so as not to cut up the farmers' fields, and, as everybody was busy building up a substantial homestead, these lanes received little attention. Mud made these country roads almost impassable in the spring; dust made them insufferable in the summer; steep grades limited the loads even when the roads were passable. They were a little better than English roads in the days of Charles II, pictured so vividly by Macaulay, but only a little.

THE LATE LOGAN WALLER PAGE

Over these lanes of mud and through the clouds of dust passed from country to town or railway station a large part of the raw materials used by our people. The ruts, mud, stones, and steep grades were in the foreground of one's mental picture of rural life; they emphasized the difficulties of the farmer in marketing his crops and obtaining his supplies; they loudly proclaimed the isolation of his family. Yet tradition and daily contact so accustomed us to all these uncivilized conditions that we looked upon them as a manifestation of Nature, not to be opposed successfully by mere man except within a few miles of wealthy communities.

To-day the old roads of this kind are anathema to every intelligent man. We know that good roads are one of the most important economic and social factors in rural development and afford legitimate relaxation, worth spending hard-earned money for, to that large part of our city people who derive one of their chief pleasures in driving through the country. And so, at the end of this short span of twenty-five years, we are all clamoring for better roads. Many of us are talking about good roads so much and so often that we have forgotten that most of what we say which is worth saying was patiently taught to us years ago, when we listened only perfunctorily, by one man, the same man to whom we have turned ever since for help over the hard places in our road problems.

A Washington Bureau Chief with Ideals

An idealist whose imagination clearly pictured better conditions for a whole people, an engineer who knew how to reduce his dreams to practicable plans, a man of such forceful personality that he wrested from an uninterested public the necessary initial support for those plans, an executive who finally carried them forward by administrative skill so successfully that the entire country calls urgently for more of this service, was suddenly taken from his great responsibilities on December 9, 1918.

Logan Waller Page, the nation's road-builder, was a man who maintained the best

traditions of a family distinguished for public service since the days of the little colony at Jamestown. He did this, moreover, in a way that was a surprise to those inclined to believe that permanent public office affords no opportunities which attract good men. His career is an inspiration to others in office who are striving to help the public utilize in a better way and in a larger measure the resources which scientific research and good engineering experience provide. His life, cut short in his forty-ninth year, affords a well-rounded example of the good a man can do and the distinction he can win as a loyal, intelligent, active bureau chief at Washington.

First Federal Director of Public Roads

Although a man of broad scientific attainments and deep interest in many of the leading features of the world's work, he subordinated all of them to his life's main object, bettering the country roads. While an undergraduate at Harvard University, he investigated the road-building materials of Massachusetts and immediately after leaving college he became the geologist and testing engineer of the highway commission of that State, the pioneer in using scientific methods in attacking its road problems.

His investigations convinced the few men who were then aware of the breadth and importance of our highway problems that scientific knowledge of the road-building materials of the country was necessary. Secretary Wilson of the United States Department of Agriculture needed little urging to authorize such an investigation, and, at his invitation, Page undertook the work in 1900. In 1905 it was combined with the economic studies of highways and highway transportation which the Department had inaugurated a few years before and the Office of Public Roads was formed, with Page as director, to carry on all the Department's road activities.

From this little beginning has grown, under his inspiration and direction, the important United States Bureau of Public Roads, now coöperating with every State in building a system of roads which will cost over $150,000,000, carrying on a comprehensive program of research to furnish wider knowledge of ways to obtain more road value for the money spent on our highways, and, of late years, showing how the principles of engineering may be applied to the irrigation and drainage of farms and to the improvement of farmers' buildings and mechanical equipment. It is this bureau which has made engineering so helpful to the farmer and has lifted him out of the mud-bound isolation of a drab-colored existence into an active, vitalized life as closely in touch with the great currents of the world's activities as that of the average metropolitan resident.

A "Salesman" of Good Roads

All this was accomplished only after the hardest kind of missionary work. Early in the days of the Office of Public Roads Page learned that no decided good came from merely publishing bulletins on the right methods of building roads and related topics. He saw that it was necessary to go out into the country and "sell" good roads to those needing them, just as other specialists were selling improved machinery and better stock. It is a strange thing that so many kinds of knowledge useful to us in our daily tasks must be forced on us. It is still stranger that so few of the many men engaged in the investigations supplying that knowledge realize that their public service is only partly finished when their results are in print. The work is not done until men are made desirous of reading what is printed. And so Page, following the advice of friends in business, traveled about the country, introducing good roads to State, county, and town officials, to the farmers on the prairies and the planters along the bayous, to granges and to banking associations.

This part of his success is of great significance to those interested in the betterment of any aspect of our national life. It was this characteristic of ready use of any legitimate means to an end which first lifted him from the level of a student widening the horizon of our knowledge to that of a teacher putting his discoveries into a form to be readily understood and assimilated, and then lifted him again to the level of the reformer who can make persons desire to obtain the knowledge they should have.

Arousing Interest in Highways

Of course, one man with a little staff of able associates could not arouse the interest in highway improvements which has grown so rapidly from 1905 to the present time. Help was needed and Page obtained that help by inspiring men in every walk of life with his intelligent enthusiasm for rational road betterments. If one plan for arousing a State to the necessity of getting a dollar of road improvements for each dollar of road taxes paid failed to produce the desired result, he

tried another and another until, for one reason or another, every State now has a State highway department and there is a fairly general understanding that roads cannot be properly built and maintained without competent engineering advice. In 1916 we spent about $300,000,000 on our country roads, a sum so great that the desirability of using it to the best advantage is self-evident.

By 1916 the interest in road-building was so general that Congress decided upon national participation in the improvement of roads useful for carrying the mails and serving the general welfare. The federal aid road law of that year is one of the great acts of constructive legislation of the Wilson administration. Under it the resources of the federal Government and the individual States are happily joined for the betterment of our basic arteries of transportation, the rural roads. The administration of the law was delegated to the Secretary of Agriculture, who in turn assigned to Page the executive charge of the work.

This law, as well as the Agricultural Extension law of 1914, established a new principle in Federal and State coöperation, yet so well were its provisions drawn and so wisely have they been administered that a searching investigation of the operation of the law, recently made by one of our leading State highway engineers, brought forth from the various States but few criticisms and those, with two or three possible exceptions, of minor significance. This record with a new kind of legislation is proof of a real achievement of which the Congressmen who passed the law and the Department of Agriculture may be justly proud, and to which Page contributed largely.

Road-Building in War Time

When the United States took up arms in 1917, public works were rudely checked. Transportation, money, materials and labor were needed in enormous quantities at once for winning the war. The agencies called upon to furnish such supplies began wholesale embargoes on non-war activities. Page saw that road work should not be wholly stopped by the war program, for a large amount of it could be done without affecting military activities in any way. With the aid of the Secretary of Agriculture he organized the United States Highways Council on which every government department and establishment having an interest in roads and streets was directly or indirectly represented.

In order to know what materials were needed for highways and streets, Page, who was chairman of the Council, obtained the help of the State highway departments, following his characteristic method of carrying on work coöperatively. Any city or county desiring to build or maintain a street or road submitted its requests for materials or transportation to the highway department of its State. If the department did not consider the work a war-time necessity the application was disapproved and never reached Washington. If the department approved an application it was sent to the Highways Council, which then did its best to furnish what was requested for every project of real necessity. When the Council was organized, the absolute cessation of street and road work was threatened; when the armistice was signed the Council had furnished about two-thirds of the materials needed to meet the requirements of the applications approved by the State Highway Departments. That achievement, a great benefit to city and country alike, was largely due to Page's foresight and administrative ability.

Secretary Houston's Tribute

This is not the place to speak of Page's professional ability, as engineers appraise engineering attainments. Of the broad aspects of his work as the nation's road-builder none can speak more authoritatively than the Secretary of Agriculture, D. F. Houston, who recently paid this tribute to his friend of many years and valued assistant since the present administration assumed office:

> Page was the real pioneer of the modern good roads movement in the United States. He inaugurated the work in the Federal Government. He organized and developed a great service—one of the most valuable in the nation. The Bureau of Public Roads is a great monument to him. He directed it with its increasing duties with great skill and efficiency. Not only the Nation and the States, but also people in all parts of the country are greatly indebted to him, and are living fuller and more satisfactory lives because of what he did.

Page cared little for praise, which came to him from all quarters. The reward he prized was the passage of sound highway legislation, the organization of efficient highway departments, the building and maintaining of correct types of roads for the traffic to be carried. All these things are coming about more easily and more frequently because he devoted his life to advocating them; they are a national memorial to his ability.

LEADING ARTICLES OF THE MONTH

THE PART OF THE UNITED STATES

THE December number of *The Round Table* (London) contains a very remarkable article—"Windows of Freedom"—on the part which America is destined to play in the coming resettlement of the world. "The future position of America in the world," says the writer, "not that of Germany, Austria or Turkey, is the great issue which now hangs on the Peace Conference."

The old system of the "Balance of Power" in Europe has vanished as a result of the war. England, in spite of herself, was from time to time compelled to interfere to preserve the balance; the United States always stood aloof; but to-day America, as well as England, sees that the world is one. "Their isolation, which was never splendid, is now impossible." At the Peace Conference a new system for preserving the peace and good government of the world will have to be devised, but at its first session the Peace Conference cannot hope to produce a written constitution for the globe, or a genuine government of mankind. What it can do is to establish

a permanent annual conference between foreign ministers themselves, with a permanent secretariat, in which, as at the Peace Conference itself, all questions at issue between States can be discussed and, if possible, settled by agreement. Such a conference cannot itself govern the world, still less those portions of mankind who cannot as yet govern themselves. But it can act as a symbol and organ of the human conscience, however imperfect, to which real Governments of existing States can be made answerable for facts which concern the world at large. To such a body civilized States can be made answerable for the tutelage of regions assigned to their care by the Peace Conference because their inhabitants cannot as yet maintain order for themselves. On the maintenance of order in such regions depends, not merely their own prospects of freedom, but also the future peace of the world. With such responsibilities the British Isles are already too heavily charged. The allies in Europe ought not be made answerable to a League of Nations for the whole of the regions outside Europe now severed from the German and Turkish Empires. The future of the system depends upon whether America will now assume her fair share of the burden, especially in the Near East and even in German East Africa.

The idea that the League of Nations which will come some day will spring fully grown from the Peace Conference is one doomed to disappointment, says the writer. It is as yet a mere aspiration, and no two people are agreed as to the practical means whereby that aspiration may be satisfied. But the proposal for an annual conference is obviously feasible. It bars nothing. It leaves the future open for everything. It insures the discussion of, and facilitates the approach to, whatever closer organization is possible. Out of it the League of Nations will surely emerge, an edifice not hastily erected on shifting sands, but built for all time on foundations broad, sure, and enduring.

Turning to the part of the United States in the world government of the future, the writer suggests that an infinite sphere of usefulness is open to America in the Middle East. The disposal and government of the derelict territories severed from the German and Turkish Empires is the most difficult of the questions which the conference has to face. They cannot govern themselves. How are they to be governed? Under a system of international control? That has always failed in practice. On the other hand, any distribution of these territories among the European Allies is bound to lead to jealousies and bitterness. In the regions of the Middle East there are engagements with France and Italy which must in any case be observed, but if America can disregard her old traditional aloofness, it is surely not too much to ask that her allies should forget their old rivalries and claims:

If once the problem is really considered on that plane, it will come to be seen how largely it is solved if once America will make herself answerable to a League of Nations for peace, order, and good government in some or all of the regions of the Middle East. Her very detachment renders her an ideal custodian of the Dardanelles.

For exactly similar reasons, her task in preserving the autonomy of Armenia, Arabia, and Persia will be easier than if it were to rest in our hands. Her vast Jewish population preeminently fits her to protect Palestine. Her position between India and Europe removes all our objections to the railway development which these regions require.

WORK BEFORE THE ALLIES

IN the *Fortnightly Review* (London), Dr. E. J. Dillon outlines some of the difficulties which confront the Allies in clinching their military victory. He says:

In the first place, it behooves them—and the spokesmen of Great Britain in particular—to draw the bonds of friendship between this country and the United States much closer than heretofore, and to come to a satisfactory agreement on the crucial questions to which the events of the past four years have given a commanding place in the interests of mankind. Their differences on these subjects are not yet absorbed by consciousness of the providential destiny before the two peoples. There should be greater alacrity in progressively adapting our policy to the ever-growing exigencies, and although there are many notes to our statesmen's song they cannot plead that President Wilson's ideas are too deeply rooted in abstract theories to be applied to the concrete world of to-day, for they have publicly made them their own.

That the difficulties in their path are redoubtable, and the means which they have left themselves to overcome them are meager, cannot be gainsaid. This lesson will be borne in upon them at the conference. But experience, say the Turks, is like a costly comb given to a man when his hair is gone. The principle of the League of Nations has a twofold action: it dissolves before it can cement, and while the solvent is infallible the cement has not yet been tested, and is therefore a matter of guesswork. The heterogeneous must be reduced to its component units before all these units can be welded together in one organic whole. It is a process of rejuvenation resembling Medea's, which required the living being who was to undergo it to be first killed and cut to pieces. And even then revival was not guaranteed. The ram who was boiled in her cauldron came out a lamb, but King Pelias has remained dead to this day. That the German race, which is homogenous, numerous and resourceful, and doubtless the Russian race later on, will come out of the cauldron rejuvenated and fortified is certain. But what will happen to the remaining European states is dubious.

On the other hand, the only alternative to the League of Nations would seem to be a system of unstable equilibrium of which the corollary is the continuation of armaments and the constant danger of further warfare. But this, again, will not be brooked by the peoples of the world, who are resolved to end militarism and its works, even though they should have to wreck the political and social fabrics in the effort.

The abolition of conscription is no settlement, because militarism can be inculcated in the family, the school, the gymnasium, and the university. Neither would a league of the present Allies bring the requisite solution, because it would be tantamount to a condominium of the world. Equally futile is the offer which our publicists have so generously made to the United States to take over their share of the "white man's burden," and rule the Near East from Constantinople. I sounded American statesmen on this subject in Washington a few weeks ago, and they all declined it with thanks. In a word, the Allies' trustees have to pilot their respective ships of state between more terrible dangers than the rocks of Scylla and the whirlpool Charybdis.

EFFECTS OF THE WAR IN GERMANY DESCRIBED BY GERMANS

JUDGING by the articles in the German reviews for December, the unity of the German nation during the war seems to have been torn asunder by different party cries and varying aims, and the *morale* of the people was evidently terribly affected by so much political disunity.

Writing in *Nord und Süd,* Dr. Max G. Zimmermann says the League of Nations may be a good idea in itself, but it has been invented by Germany's enemies to vanquish the Germans by a majority of votes. The Germans must, therefore, see to it that they get the fullest securities through the League. Also in Germany's internal affairs influence from without has acquired a terrifying power. It is largely to this influence that the transformation of the German form of government is to be attributed, the suddenness of which has been so momentous to the nation.

The further development of home affairs should have proceeded from the German people themselves at the end of the war. When will Germans learn to think for themselves? Oh, that in proud national consciousness they had only had the courage to be themselves? That alone impresses the world.

Their wonderful individualism, however, has

too often led them to want of unity among themselves. So long as the Fatherland was in danger, all special desires should have been suppressed. In the war and in the peace negotiations, externally complete unity should have been shown. After four years of enormous successes lack of unity among the political parties, the hunger for power of some of them, weakened the nation. The deep and rich sensibility which is reflected in German art has been at once the strength and the weakness of the German people. It made the majority of them weak in face of the momentary successes of the enemy.

From such moods arose the Majority Resolution of July 19th, 1917, on peace without annexations or indemnities, and the peace offer, with its fateful consequences, of October 5th, 1918. In history the German nation has frequently shown itself great in suffering, and in the war it has achieved almost the superhuman. Let the nation now, by steadfastness and preparedness for a struggle, rescue in the peace negotiations what can still be rescued.

Let the nation remember that Frederick the Great at the Peace of Hubertusburg asked for nothing more than the preservation of his domains, and yet in association with this came the increasing greatness of Prussia, because then as now an era of mighty deeds had gone before, revealing to the world the inner value and the inner strength of the state. May the enormous strength which has been displayed in the struggle and the suffering of the Germans in the war spur them on in the coming years of peace to the same achievements in all domains of economic and intellectual life as those by which in the last decades they excelled all other nations.

In another article in the same review, Dr. Richard Müller discusses some of the "kultural" effects of the war. The plays and the operas heard during the war, he writes, are not very different from those which preceded it. After some attempts to banish foreign works, and to awaken a sense for national art of the grand style, sensations were sought in Hungary and Scandinavia, instead of in France and Russia, but in reality everything remained much as before.

Even German poetry remained unchanged. The gigantic successes of the later Strindberg, Meyrink, H. Mann, and others, may in the aesthetic sense have been deserved, but whether they lead to the conclusion that a new intellectual orientation of the people has taken place is another matter. The contrary is indeed the fact, for the desire for sensations has increased and not disappeared.

The German people are warned that the peace conditions will be very unlike those which prevailed before the war. The change will be most in evidence in economic life.

LORD BRYCE ON ARMENIA'S FUTURE

IN *The Contemporary Review* for December Lord Bryce applies the general suggestion thrown out in the *Round Table* article, which we notice elsewhere, that the United States should undertake the future government of the ex-German and ex-Turkish territories in the Middle East to the particular case of Armenia.

Turkish rule over populations of a different faith must cease forever to exist: so much is universally accepted. But the elimination of the Turks raises at once the question of reconstruction. The first thing to be done is to restore order in the devastated regions of Armenia and Cilicia, and this can be done almost immediately. But then arises the question, Who is to govern and administer these countries, since, in their present devastated and half-depopulated condition they cannot govern themselves?

That which we should contemplate and work for is a Christian Armenian state—of course, with full protection secured to every race and every religion, but this cannot be for fifteen or twenty years, and in the meantime there must be a protecting power, a Western civilized power, who can send in trained officers, some military, some civil, and so set on foot an administration which will command not only obedience, but also confidence in its uprightness and impartiality. This power, says Lord Bryce, should clearly be in the United States:

To it would belong one unique advantage. Its missionaries have already won the gratitude and affection of the Christian population, to whose progress they have for the last seventy or eighty years rendered inestimable services by their schools and colleges, while they have also enjoyed the respect and confidence of the Muslim population, whom they have not tried to proselytise, and to whom their schools, colleges, and hospitals have always stood open. These missionaries are the only foreigners who really know the country and understand the people. If the United States were disposed to undertake the philanthropic task of supplying administrators for a period of, say, twenty years, it would have an opportunity unprecedented in history of conferring permanent benefits such as no country has ever received at the hands of another. If, however, the American government and people should hesitate to make such a departure from the long-settled lines of their policy, nothing would remain except to find some European power, or some group of powers, willing to undertake the task.

ITALIAN ADVOCACY OF THE LEAGUE OF NATIONS

THE sympathetic attitude of Italy toward the great project of a League of Nations has found expression in the founding of a special magazine to further the progress of the good cause. This is to be issued monthly and is entitled *La Società delle Nazioni;* the place of publication is Milan, the initial number having appeared in November of last year. It contains a half-dozen papers treating of various aspects of the question.

One of the most significant is by Gerolamo Lazzeri, who sees a hopeful sign in the fact that the uncompromising individualism that has been the characteristic of the state in times past, has given place to an individualism of a much milder form, one that is destined to disappear gradually.

The state is no longer regarded as merely a phenomenon of force, as nothing but a great driving engine for the commercial and cultural energies. The consciousness of its own being, the necessity to make itself respected, have imposed upon it respect for others. It has ceased to feel itself an isolated organism in the family of nations.

When the need for expansion was realized, for giving to its commerce and industries an ever wider outlet, the wish to conquer its cultured neighbors yielded to the desire to extend its sway over regions where the populations were still in a primitive stage of civilization, and then to develop the newly acquired colonies. In this policy of colonial conquest and up-building the nations have been forced to justify their aims by giving to their action the character of an irradiation of civilizing forces.

Germany's great error and crime should not be sought in her effort to find wider spheres of activity, but in her failure to understand that it was impossible to impose a hegemony upon peoples which had acquired a full consciousness of their being, and had long passed the period in which they could be treated as colonies.

The writer finds that in giving the world to the flames of war, Germany was striving to realize a League of Nations based on the old Cæsarean principles. She could not see that history never turns backwards. The Roman Empire was successfully founded because Rome represented an almost unique center of civilization, and could impose this upon all the peoples which had remained barbarians or semi-barbarians; but Germany enjoyed no real primacy in this respect for her civilization was only one among many.

To-day it is no longer possible for one nation to dominate over the others, they must all be content to collaborate in a truly international development. To render this practicable the national government of the states must conform to the new ideals. There must not be a dominant caste, basing its power upon force alone. When this is the case the rule of force will be inevitably applied in international as well as in national politics.

Turning from this latest-born of Italy's magazines to the time-honored *Nuova Antologia* (Rome), we find there, from Signor Major des Planches, formerly Italian ambassador to Germany, a glowing tribute on the part taken by President Wilson in the entrance of the United States into the world war. He writes:

> One of the decisive facts in the great war was the participation of the American people, with all the means at their disposal of men, material and money, in association with the Allies, in their struggle to defend the liberty of Europe and of the world against the efforts of the Central Powers to establish a hegemony.
>
> The resolution taken by the United States to form a great army and, in spite of the menacing submarines to send it across the ocean, provided with all the immense material that modern war demands, to combat for a cause that did not directly concern the territorial integrity or the existence of the home country, was assuredly a bold and advantageous enterprise of which history offers no parallel.
>
> It is a matter that well merits research, and one that excites our admiration, why and how the American people, naturally averse to warlike undertakings and interferences, should have reached such a determination. But this was both logical and well-considered, and was strictly in accord with the principles formulated and followed from the very foundation of the country by the wise men who established it and guided its destinies.
>
> We find in the messages of President Wilson the same spirit that inspired Jefferson with the Declaration of Independence. For although Washington had left the supreme recommendation to avoid any interference with European affairs, and Monroe had promulgated the doctrine to which America has constantly conformed in its foreign policy, the principle of a splendid isolation, still the country was forced to act as it did in order to be consistent with its history.

WHO WILL PAY THE WAR'S COSTS?

THE all-important question of German indemnities—the just amount, the manner of securing it, etc., is cogently discussed in the *Revue de Paris,* by Jean Bourdon. He favors, as much more effectual both in obtaining the just dues and as a guarantee of peace, annual payments extending over a long period instead of over two or three years.

He says in part:

Reparations, guarantees—such is by general consent the peace program of the Allies. Two points have not been generally considered: the greater the indemnities the stronger will be the guarantees of peace; but to obtain those indemnities new methods must be employed—a perfectly just procedure, since all the means employed would not even liquidate the debt which the Central Powers owe the Entente.

What reparation are we justified in exacting? It is not a question of depriving Germany of her property, but that of her returning ours. What does she owe us for the present war?

First: no one doubts that she ought to indemnify *in toto* the invaded people for all the destruction she has perpetrated.

Second: The maimed, the widows and orphans, as the greatest sufferers, should be pensioned, not by France, as some claim, but by her aggressors.

Third: Are not the Allies justified in claiming the repayment of their war expenditures, since they were occasioned by Teuton aggression?

These claims seem almost too obvious to be debated; yet they are contested by some on the score that the debt would transcend Germany's total fortune, public and private. That reasoning is manifestly ambiguous. Is it a question of fact or of right? If the Central Powers can not assume the whole debt, the victims of their actions must perforce bear a part of the burden, but it should, at least, be made as light as possible. Legally, a credit does not cease to be legitimate because the debtor is insolvent: the creditor is justified in seizing the debtor's entire possessions—in other words, the total confiscation of the public and private wealth of the Central Powers (not including State railways, etc.) would be conformable to equity.

The question remains, which of these confiscations, all just, are practicable. And primarily: Should they constitute a capital furnished by Germany successively, or annuities stretching over a long time? The first method is usually preferred, 1871 forming a precedent. But then it was a question of a billion dollars. France had no difficulty in raising it in two years.

Before the World War, Germany laid by $1,600,000,000 yearly. If she were to indemnify the Allies within two or three years she would, therefore, pay twice or thrice that amount, at the utmost: to require prompt payment of the indemnity would mean that Germany should pay only 3 or 4 per cent of her indebtedness—not to speak of Austria, which, owing to its deplorable economic situation, could offer very little. Such indemnities, absurd as reparation, would not deprive the Central Powers of the means of renewing their aggression.

If we repel such a prospect; if we do not wish our dead in the Great War to have fallen in vain, we must break the instruments of war in our enemies' hands. They must be rendered incapable of preparing for or waging one. Territorial, military, economic precautions must be taken against them: one of the most important consists in imposing upon them the payment of forty or fifty indemnifying annuities.

To impose bankruptcy upon Germany is to deprive Krupp and his like of their gains. If all the possible confiscations in Germany are just, is this one not pre-eminently so? And it would be politic as well as just. We want to deprive the Germans of the desire of ever waging war: that can only be done by making every individual feel that war is anything but a profitable industry. But could they do so if they saw in their midst fortunes created or increased by the war? The bankruptcy of the state would be followed by a financial crisis, which would, however, be of short duration. The crisis of 1907 in the United States furnishes an example of swift restoration of prosperity.

What annuities would these various measures produce? $1,400,000,000 in the German budget would be available; to this must be added the sums gathered by taxation—in all, an annuity of $2,400,000,000, not even half of the interest of the war debt which German aggression has imposed upon the Allies.

It is necessary, therefore, to have recourse to other measures to obtain the payment which is our due. It is notably with that end in view that one must consider the suppression of the great landed estates in Central Europe. We know that east of the Elbe all, or nearly all, the soil is divided into great domains. The peasants, who remained serfs in Prussia up to the beginning of the 19th century, received either little or no land on their liberation. It is from this system of land ownership that the influence of the Prussian nobility springs. A like situation exists in Hungary. To deprive the Junker and the Magyar feudal lords of their wealth and the influence flowing from it would be to punish an important part of those responsible for the war, and to prevent the recurrence of new wars.

The Allies are involved in debt, and even if those least involved should assume a part of the debt of those most heavily burdened, none of the nations could exist with their enormous liabilities. Beginning to-day, the various countries will have to discharge a great part of their war debts, unless they can count upon the Austro-German annuities. In other words, in France, for example, there would have to be levied an extraordinary tax upon capital, amounting not to one-tenth, as has been proposed, but to one-third—a partial confiscation of private fortunes.

THE FRENCH DEMAND FOR SHIPPING

IN the January number of *Le Correspondant* (Paris) under the title "How Shall the Allies Offset the Destructive Work of the Submarines?" an anonymous French writer throws an indirect cross-light on the persistent reports of strained relations between French propagandists and the English-speaking delegations to the Peace Congress.

Former discussions have been actuated, says the writer, by separate interests and too narrow views. The needs of the World-State as a whole must alone be considered.

The total tonnage available for the oceanic carrying trade of the world is estimated at forty millions—a loss of two millions since 1913. For a period not yet definable, conditions will be neither those of war time nor as in settled, permanent peace. Millions of men must be fed where they now are, until finally repatriated. Many essential industries must be completely equipped anew. (The writer ignores, comparatively at least, the importance of provisioning whole nations until agricultural conditions are restored.) It is clear that the tonnage now in existence is quite inadequate. All the shipyards of the world should be kept in fullest possible activity. But these present and prospective resources for commerce should be distributed among the victors according to the relative losses and sacrifices of each separate country in the war! (This surprising thesis is all but taken for granted as evident, and practically applied to four great powers only—England, United States, Italy, France—to the evident advantage of the last-named.)

The United States has increased her tonnage by four millions during the war, besides a half-million obtained from Japan. England has lost nine millions through the U-boats, and has built meantime less than two-thirds of that amount. France, even in 1913, had only 25 per cent. of her carrying trade under her own flag, and is to-day even worse off. Italy has suffered much less, and is not gravely inconvenienced.

France requires colonies sufficient to supply all her material needs independent of other countries (this again being quietly assumed as self-evident) and a merchant fleet adequate for all transportation to and from her home-ports. She proposes, for the present at least, a government-owned (or subsidized?) transportation system; and, as her own navy-yards are in an inchoate state, a prompt beginning must be made "from without." (The unity of interests throughout the league or world-state is obscured during this part of the discussion.)

In the future, the immense navy-yards of the United States will turn out up-to-date specialized vessels, refrigerator-ships, tanks, cattleboats, etc. It is recognized that we in the United States, transporting finished products for sale abroad, have now more imperative need to fly our own flag over our merchant fleet than when we sent forth chiefly raw materials, e. g., cotton and cereals, with no serious rivalry to face.

The hastily built "standardized" output of the last year or two is, we are told, short-lived and very imperfect. The United States should charge off at once to profit and loss a large part of its actual or replacement cost, and merely endeavor to recoup the balance, at most, during the few years that these vessels can be kept seaworthy.

The conclusion, not boldly drawn, but camouflaged under phrases as to unity of interest and sentiment, appears clearly to be, that the French should receive from us at once, as a matter of right growing out of their superior sufferings and losses, a very large share at least of this "standardized" mercantile fleet. This action must be taken before French sailors are attracted to other national flags, or even drift away into other employments.

The question of utilizing the German merchant marine is much more frankly—and even mercilessly—handled. The illegal and piratical character of the unrestrained submarine campaign is emphasized. Admiral von Holtzendorff is cited as authority for an estimate of fifty billion marks for the amount destroyed down to July, 1918. German expressions of glee over the grievous lack of food and fuel in Allied countries are quoted.

The conclusion is firmly drawn that Germany's entire mercantile fleet, in home, allied, or neutral ports, with the output of her shipyards for the next years, should at once pass into Allied hands—preferably, under the French flag. No beginnings of German commerce proper should be tolerated until all the chief Allies are in satisfactory shape. Even the provisioning of Germany itself, if actually necessary, should be done by Allied crews under the Allied flags.

A RUSSIAN REVOLUTIONIST APPEALS FROM BOLSHEVISM

MADAME BRESHKOVSKAYA, known the world over as "The Grandmother of the Russian Revolution," who spent half her life in Russian prisons and in Siberia as an exile, is now visiting the United States. Her mission here is to tell the American people the truth about conditions in Russia and to organize help for the four millions of Russian orphans now left without shelter.

In the course of an address delivered in New York Madame Breshkovskaya said:

There is no doubt that Russia will be able to find the right path, but her pains, her bloody sufferings will be known only to the millions of Russian mothers and the millions of our other innocent martyrs, our orphans. Flooded with tears and blood, Russia moans and cries out to the world. She is a living body, and her tortures cannot be looked upon cold-bloodedly as an extraordinary, never-before witnessed experiment in social evolution. She is alive, and every pore of her body is shedding blood. The illness that was not stopped in time, I fear, may be prolonged for years. Only through insistent, and incessant work and efforts can Russia be brought to the normal conditions, to the position in which she found herself two years ago, after the glorious Revolution of March, 1917. In those days there was real freedom in Russia, and it seemed that our young country had every possibility for peaceful evolution and the free building of her future. I may assert, without boasting, that the March Revolution, perhaps the most beautiful and the most rational revolution in the world, was brought about, among other factors, through the efforts of the Party of Socialists-Revolutionists whose program for more than one-half century presents a basis for settlement which will satisfy the demands and aspirations of the overwhelming majority of the Russian people.

© Paul Thompson, New York

MADAME CATHERINE BRESHKOVSKAYA, THE WELL-KNOWN RUSSIAN REVOLUTIONIST NOW VISITING THE UNITED STATES

In explaining Bolshevism Madame Breshkovskaya said to a few American journalists:

You do not visualize Russia properly. All of Russia is not in disorder, only certain provinces. Russia is more than Petrograd and Moscow and Kiev. The Cossack provinces are in order. The peasants are waiting—in the disordered provinces—impatiently for peace and order, that they may work. The great mass of people in Russia are yearning toward stability and working for it. I do not think you feel the causes of Russian Bolshevism. The phenomenon in this country could hardly be the same thing. The psychology of the real Russian Bolshevist is that reaction produced by decades, even centuries, of oppression. He has inherited a hysteria, a fixed idea; he is incapable of seeing that he is only substituting one rule of terror for another. The Russian Bolshevist says: No one shall have a voice in the government who does not work with his hands. How stupid! They do not see how many modes of service exist, and that all are essential to the well-being of Russia.

But there is one thing Russia will never do; she will never yield to monarchial dominion again. She will work out her own particular form of republican government—slowly—slowly, but surely,—for the Russian people are very clever—and in time you will have orderly conditions and a great civilization in the place of chaos.

Returning to the matter of Bolshevism, Madame Breshkovskaya said:

The German agents supported the Bolsheviki. These agents had the backing of many ignorant Russians—the illiterate peasants—because they promised that they would give them land. Then when the Bolshevists got into power, they forgot their promise and turned to all the criminals in Russia to support their iniquitous rule. All the convicts were let loose from the prisons to serve them, and in their ranks you will find the Czar's former military police and the spies of the old monarchy. These professionals in the art of murder are doing all the dreadful deeds about which you hear in this country. Teachers are persecuted. They are thrown into jail if they do not swear fidelity to Bolshevism. For over a year the schools have been largely deserted, no teachers, no pupils, and no assurance that this evil condition will come to an end.

THE FRENCH DEMAND FOR SHIPPING

IN the January number of *Le Correspondant* (Paris) under the title "How Shall the Allies Offset the Destructive Work of the Submarines?" an anonymous French writer throws an indirect cross-light on the persistent reports of strained relations between French propagandists and the English-speaking delegations to the Peace Congress.

Former discussions have been actuated, says the writer, by separate interests and too narrow views. The needs of the World-State as a whole must alone be considered.

The total tonnage available for the oceanic carrying trade of the world is estimated at forty millions—a loss of two millions since 1913. For a period not yet definable, conditions will be neither those of war time nor as in settled, permanent peace. Millions of men must be fed where they now are, until finally repatriated. Many essential industries must be completely equipped anew. (The writer ignores, comparatively at least, the importance of provisioning whole nations until agricultural conditions are restored.) It is clear that the tonnage now in existence is quite inadequate. All the shipyards of the world should be kept in fullest possible activity. But these present and prospective resources for commerce should be distributed among the victors according to the relative losses and sacrifices of each separate country in the war! (This surprising thesis is all but taken for granted as evident, and practically applied to four great powers only—England, United States, Italy, France—to the evident advantage of the last-named.)

The United States has increased her tonnage by four millions during the war, besides a half-million obtained from Japan. England has lost nine millions through the U-boats, and has built meantime less than two-thirds of that amount. France, even in 1913, had only 25 per cent. of her carrying trade under her own flag, and is to-day even worse off. Italy has suffered much less, and is not gravely inconvenienced.

France requires colonies sufficient to supply all her material needs independent of other countries (this again being quietly assumed as self-evident) and a merchant fleet adequate for all transportation to and from her home-ports. She proposes, for the present at least, a government-owned (or subsidized?) transportation system; and, as her own navy-yards are in an inchoate state, a prompt beginning must be made "from without." (The unity of interests throughout the league or world-state is obscured during this part of the discussion.)

In the future, the immense navy-yards of the United States will turn out up-to-date specialized vessels, refrigerator-ships, tanks, cattleboats, etc. It is recognized that we in the United States, transporting finished products for sale abroad, have now more imperative need to fly our own flag over our merchant fleet than when we sent forth chiefly raw materials, e. g., cotton and cereals, with no serious rivalry to face.

The hastily built "standardized" output of the last year or two is, we are told, short-lived and very imperfect. The United States should charge off at once to profit and loss a large part of its actual or replacement cost, and merely endeavor to recoup the balance, at most, during the few years that these vessels can be kept seaworthy.

The conclusion, not boldly drawn, but camouflaged under phrases as to unity of interest and sentiment, appears clearly to be, that the French should receive from us at once, as a matter of right growing out of their superior sufferings and losses, a very large share at least of this "standardized" mercantile fleet. This action must be taken before French sailors are attracted to other national flags, or even drift away into other employments.

The question of utilizing the German merchant marine is much more frankly—and even mercilessly—handled. The illegal and piratical character of the unrestrained submarine campaign is emphasized. Admiral von Holtzendorff is cited as authority for an estimate of fifty billion marks for the amount destroyed down to July, 1918. German expressions of glee over the grievous lack of food and fuel in Allied countries are quoted.

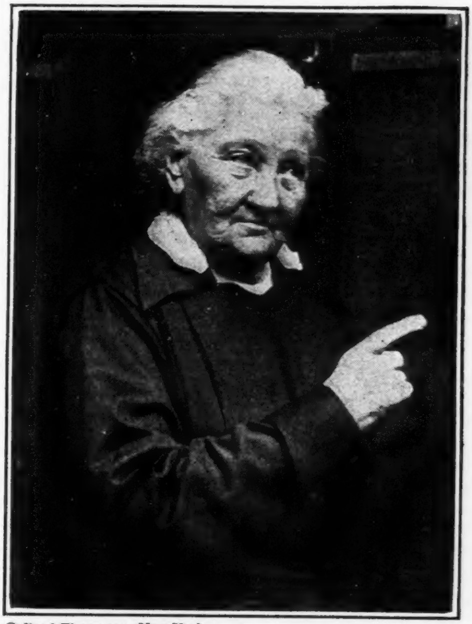
The conclusion is firmly drawn that Germany's entire mercantile fleet, in home, allied, or neutral ports, with the output of her shipyards for the next years, should at once pass into Allied hands—preferably, under the French flag. No beginnings of German commerce proper should be tolerated until all the chief Allies are in satisfactory shape. Even the provisioning of Germany itself, if actually necessary, should be done by Allied crews under the Allied flags.

A RUSSIAN REVOLUTIONIST APPEALS FROM BOLSHEVISM

MADAME BRESHKOVSKAYA, known the world over as "The Grandmother of the Russian Revolution," who spent half her life in Russian prisons and in Siberia as an exile, is now visiting the United States. Her mission here is to tell the American people the truth about conditions in Russia and to organize help for the four millions of Russian orphans now left without shelter.

In the course of an address delivered in New York Madame Breshkovskaya said:

There is no doubt that Russia will be able to find the right path, but her pains, her bloody sufferings will be known only to the millions of Russian mothers and the millions of our other innocent martyrs, our orphans. Flooded with tears and blood, Russia moans and cries out to the world. She is a living body, and her tortures cannot be looked upon cold-bloodedly as an extraordinary, never-before witnessed experiment in social evolution. She is alive, and every pore of her body is shedding blood. The illness that was not stopped in time, I fear, may be prolonged for years. Only through insistent, and incessant work and efforts can Russia be brought to the normal conditions, to the position in which she found herself two years ago, after the glorious Revolution of March, 1917. In those days there was real freedom in Russia, and it seemed that our young country had every possibility for peaceful evolution and the free building of her future. I may assert, without boasting, that the March Revolution, perhaps the most beautiful and the most rational revolution in the world, was brought about, among other factors, through the efforts of the Party of Socialists-Revolutionists whose program for more than one-half century presents a basis for settlement which will satisfy the demands and aspirations of the overwhelming majority of the Russian people.



© Paul Thompson, New York

MADAME CATHERINE BRESHKOVSKAYA, THE WELL-KNOWN RUSSIAN REVOLUTIONIST NOW VISITING THE UNITED STATES

In explaining Bolshevism Madame Breshkovskaya said to a few American journalists:

You do not visualize Russia properly. All of Russia is not in disorder, only certain provinces. Russia is more than Petrograd and Moscow and Kiev. The Cossack provinces are in order. The peasants are waiting—in the disordered provinces—impatiently for peace and order, that they may work. The great mass of people in Russia are yearning toward stability and working for it. I do not think you feel the causes of Russian Bolshevism. The phenomenon in this country could hardly be the same thing. The psychology of the real Russian Bolshevist is that reaction produced by decades, even centuries, of oppression. He has inherited a hysteria, a fixed idea; he is incapable of seeing that he is only substituting one rule of terror for another. The Russian Bolshevist says: No one shall have a voice in the government who does not work with his hands. How stupid! They do not see how many modes of service exist, and that all are essential to the well-being of Russia.

But there is one thing Russia will never do; she will never yield to monarchial dominion again. She will work out her own particular form of republican government—slowly—slowly, but surely,—for the Russian people are very clever—and in time you will have orderly conditions and a great civilization in the place of chaos.

Returning to the matter of Bolshevism, Madame Breshkovskaya said:

The German agents supported the Bolsheviki. These agents had the backing of many ignorant Russians—the illiterate peasants—because they promised that they would give them land. Then when the Bolshevists got into power, they forgot their promise and turned to all the criminals in Russia to support their iniquitous rule. All the convicts were let loose from the prisons to serve them, and in their ranks you will find the Czar's former military police and the spies of the old monarchy. These professionals in the art of murder are doing all the dreadful deeds about which you hear in this country. Teachers are persecuted. They are thrown into jail if they do not swear fidelity to Bolshevism. For over a year the schools have been largely deserted, no teachers, no pupils, and no assurance that this evil condition will come to an end.

HOW TO ADVERTISE IN CHINA

"THE population of China," says Trade Commissioner John A. Fowler, in *Commerce Reports* (Washington), "is variously estimated at from 325,000,000 to 400,000,000, and competent observers have estimated the literacy of the Chinese people to be around 10 per cent. At first glance one is inclined to conclude that there is a large percentage of these 400,000,000 who cannot be reached through the printed message."

The writer points out that this conclusion is fallacious, and in the course of his article presents some novel information concerning advertising methods employed nowadays in China. He says:

China has been, and still is, an unexploited field in many lines of merchandising; and trade has followed the lines of least resistance. The most spectacular advertising campaigns have been made to the masses, and the success of the campaigns for introducing kerosene, cigarettes, and the patent medicine "Jin Tan" are striking illustrations of the efficacy of advertising of this class. In the first case, the selling campaign was connected with a real need; in the second it was an appeal to a habit; and in the third to the longing of the physically unfit for health.

On the other hand, these successes must not lead to the conclusion that there is no sale in China for higher-priced articles. The popular opinion in America seems to be that China is a country of slow, patient, and industrious, but always poor people. There is a large class of buyers in China who can afford to buy anything they consider necessary to their comfort, as well as many of the luxuries of life.

In China advertising is not organized as it is in the United States, nor as it is in Japan. The difficulties that the American advertiser will meet in initiating an advertising campaign are many and annoying to the American type of business man who demands results; nevertheless, a start has been made toward organizing on broad and sound lines.

China has thousands of newspapers, though they tend to be short-lived and are subject to frequent changes of name. The foreign advertiser will find it difficult to do business with them directly, and should employ a reputable agency as go-between. One agency in Shanghai has established satisfactory business connections with about 200 newspapers throughout the country and is able to furnish detailed information concerning each of them. Newspapers in European languages reach and influence the Chinese of all classes, largely through the missionaries.

The Chinese newspaper has essentially a class circulation as compared with the popular newspaper in the United States. Circulation figures must be taken with a fair understanding of the oriental propensity for self-appreciation. The average circulation of all the more reliable newspapers in China will not exceed 3,000, but this circulation will be in the first instance to a class with a particularly high purchasing capacity. After the first reader finishes with his paper it is read by his friends, who often read it aloud to relatives who can not read. In China there is an almost superstitious reverence for the printed or written word, and newspapers are often read to shreds. When it is finished as a newspaper it enters on its career as wrapping paper, and the more familiar characters are read by the partly literate.

Billboards are extensively used in China for advertising purposes, and there are also concessions for advertising at the railway stations, controlled by an English agency at Tientsin and a French agency at Shanghai. Monthly and weekly periodicals supplement the daily newspapers as an effective means of reaching certain classes of readers. The mails offer special facilities for advertising, since it is possible to arrange with the Post Office Department for the delivery of a circular or other light advertising matter with each letter. This plan has in some cases produced surprising results at relatively low cost to the advertiser.

There are several very large and well-classified mailing lists owned by foreign firms, but only one of these is available to the general advertiser. This has approximately 200,000 names classified by districts or by occupation, and there is one particularly fine list that covers a considerable part of the dealers in drugs in China.

The use of calendars is one of the most-favored forms of advertising in China, as the calendar is a most important thing in the life of every Chinese. He regulates his life by the sun, moon, and stars, and never enters upon an important negotiation or journey without a careful consideration of omens and signs. Most advertisers issue a calendar, and some who never advertise in any other way put out the most elaborate designs. They are highly treasured by the recipients and a regular trade in them is maintained. When the calendars are issued there is a general rush for them by merchants, clerks, and coolies, who turn them over to the dealers for a consideration; but as a rule there is only a halfhearted attempt on the part of business houses to get these calendars into proper hands, as the best an advertiser can wish for is that his advertisement will be bought and paid for. In the Chinese cities you will see displays of dealers in calendars on walls and in alleys where the dealers do a good business at profitable prices. One calendar issued by an insurance company in Shanghai and costing a little over $1 Mexican sold for $2.50 Mexican in the shops, and was in good demand at that.

SHALL THE SAAR COAL-FIELD GO TO FRANCE?

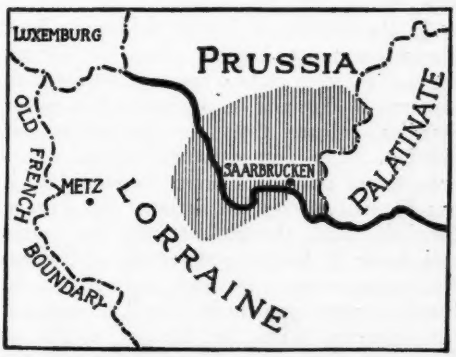
THE basin of the River Saar, lately the scene of bombing exploits on the part of the Allies and now in the occupation of the French Army, is about to furnish a new problem for the world's peacemakers to grapple with. The project of annexing the rich Saar coal-field to France is being widely advocated in the French press. The arguments in favor of this plan are set forth in *La Nature* (Paris) by Auguste Pawlowski, who also furnishes a history and description of the district in question.

The Saar coal-field is, with the exception of that of the Ruhr, the most important coal-producing region of Germany. The commercially workable beds occupy a roughly oval area extending about 45 miles southwest from Frankenholz, near Waldmohr, in the Rhenish Palatinate, and St. Wendel, in Rhenish Prussia, to and beyond Boulay and St. Avold, in German Lorraine. The Saar River bisects the area in the middle, and Saarbrücken is the commercial center of the region. Somewhat less than two-thirds lies in Rhenish Prussia, one-third in German Lorraine, and a small portion in the Palatinate.

Various figures are given concerning the coal resources of this region. The known seams of coal in a given vertical section range in number from 27 to 32, and extend to a depth of from 5000 to 8000 feet. The aggregate thickness of the seams ranges from 65 to 100 feet. One authority, Dechen, estimates the total coal reserves of the region at 45,500,000,000 tons. According to Frech, there are 5,631,000,000 tons within 1000 meters of the surface, 9,413,000,000 above 1500 meters, and 33,000,000,000 below 1500 meters. These figures refer only to seams of 70 centimeters (27½ inches) thickness and upward. English authorities have estimated the total tonnage in seams of one foot and upwards at 53,515,000,000. The coals of this region contain more volatile matter and are lower in heating value than those of northern France and the Ruhr district. They are suitable for domestic use and for gas-making, but are comparatively poor for cooking. For the latter purpose they are, however, used in combination with coal from the Ruhr district, and after preparation by special methods. The coke produced in the Saar region in 1913 amounted to 1,700,000 tons. On the whole the Saar coals are not particularly well adapted for use in the iron industry.

Coal was mined in the Saar basin as early as 1430, and the mines were systematically developed in the eighteenth century by the Princess of Nassau, whose mining rights in the region date from the Golden Bull of 1356. From M. Pawlowski's historical sketch two salient facts may be gleaned: viz., that operation of the mines by states or their rulers has generally prevailed, and that the French possessed this territory during the Napoleonic period (1793-1815). In the year 1913 the output of the Prussian part of the district was 12,406,536 tons; of the Lorraine section, 3,795,932 tons; and of the Bavarian (Palatinate) portion, 810,546 tons. More than 80 shafts were in operation. Nearly the whole output from the first of these sections was produced by 27 mines belonging to the Prussian Government. The Bavarian Government operated two mines in the Palatinate. The rest of the region was exploited by private concerns. The Prussian state mines yielded comparatively small profits. During the fiscal year 1913-1914 the expenditures for these undertakings amounted to 93,899,200 marks, and the receipts were 104,110,438 marks.

In explaining why France covets the Saar coal-field, the writer utters the complaint that the annexation of Alsace-Lorraine is going to accentuate the unfortunate situation that prevailed before the war, when it was necessary to import 20,000,000 tons of coal per annum from England and Ger-



THE COAL-FIELD OF THE SAAR BASIN

many. The reconquered provinces contain immense industries but comparatively little coal with which to operate them.

Is France justified in taking the Saar basin, which lies just beyond the old frontier of Lorraine? M. Pawlowski thinks she is, for several reasons. First, he asserts that it is a military necessity for her to push her frontier not merely to the eastward of the district in question, but all the way to the Rhine. Second, the Saar region is said to be historically French, though the author hardly presents this argument in convincing terms. Third, French industry and French science have taken an important part in developing the region. Lastly, the bulk of the mines belong to the government of Prussia, at whose door lies the chief blame for the pillage and destruction wrought in northern France during the war. It is peculiarly fitting that Berlin should make partial amends for the wrongs done to French industries by handing over to France a means of helping reëstablish those industries.

THE SWEDES OF FINLAND

A SINGULAR situation—at least in the eyes of most Swedish Finlanders—obtains in Scandinavia to-day, though a modification of it might seem to be warranted by the recent course of events in Finland. Finland is free, and the Fenno-Scandinavian bonds are free to tighten. But this seems to be happening, say the Finland Swedes, at their expense. The heart of Sweden goes out to her self-liberated daughter-country; but less, they say, to the Swedish minority there than to the Finnish majority. The Åland islanders, part of the minority, evidently want union with the Swedish kingdom; the Swedes of Finland are chary of losing the islands, fearful lest the Finns proper might thereby gain further political preponderance over the Swedish party. Swedish public opinion being generally covetous of the islands, the Swedo-Finlanders are hard put to it in persuading the Ålanders to remain with a nationality which is beginning to find itself—though within the boundaries of a new republic where might is on the side of the stronger race, that of the rival Finns.

As the Danes in North Schleswig kept themselves more Danish than the Danes themselves, so in certain respects the Swedish element in Finland has preserved a purer Swedish culture than the inhabitants of Sweden. The fact notwithstanding, whatever comes nowadays from Finland but is not Finnish appeals but little to the average Swedish mind, though certainly the works and deeds of former generations of Swedo-Finlanders meet with due appreciation in Sweden; every one there is well acquainted, for instance, with the literary works of Runeberg, Franzén, or Topelius; or with the historical importance of such names as Adlercreutz and Horn.

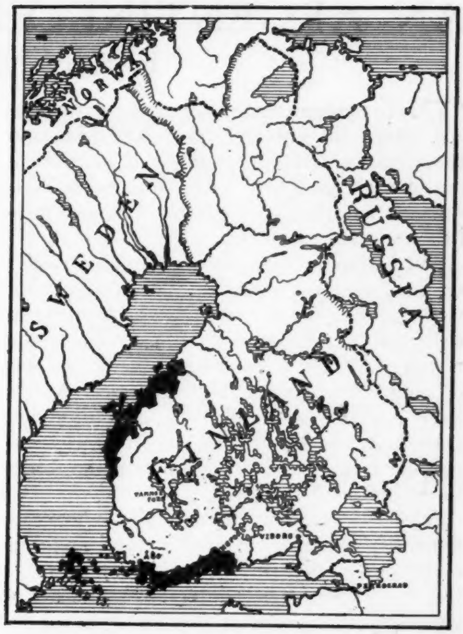
The complaint of the Finland Swedes is that the doings and productions of the *Finns* has supplanted the old interest in Finland's Little Sweden. The explanation of this Swedish neglect of kinsmen might be said to lie in the fact that the Swedes, realizing that their blood-brothers in Finland were forever lost to them, not only through Russian possession of Finland, but also through sundry temperamental if not racial differences, have hardly felt able to look upon the Swedish-speaking parts of the country as *terra irredenta.*

The situation is somewhat paralleled in the attitude of the British towards American culture, but with this difference, that whereas Americans have always maintained that their national individuality is quite separate from that of the British, the Swedo-Finlanders, under the pressure of a politico-cultural war with their Finnish neighbors, have fought insistently for the ideal of maintaining at least their cultural character as *Swedes.* But the people of Sweden, partly through ignorance and nonchalance, have felt unable to recognize that kinship in the absence of other political inducements than a desire to possess the little Åland group.

The Swedish Finlanders are now issuing frequent appeals to the Swedes for recognition as brothers in language, literature, and cultural ideals. There are quarters where these appeals are looked upon as worthy of notice; and possibly campaigns will be launched in the near future against this non-recognition of nearest of kin, and that state of affairs—so unusual in present-day Europe—will meet with considerable remonstra-

tion in the hitherto neglectful mother country.

Since the conquest of Finland by Eric the Holy a millennium ago, the Swedes in Finland have constituted the bulwark of Scandinavian culture against the encroachments of the Slavic world. But the area of Finland actually settled by Scandinavians has always been small with reference to the total area. On the whole, only a fourth of the urban population and a tenth of the rural are of Swedish extraction. It is to a considerable extent mixed with the Finnish, and to a much smaller degree with the German and Russian elements, which have almost invariably been assimilated, when assimilation has occurred, into the Swedish element and not by the Finns, who comprise the "farmer class" proper. In fact, this occupational difference has of late years been accentuated by the migration into the cities of most of the small Swedish agricultural population. The ratio of 12 or 15 to 100 in population has prevailed, so that the Swedes in Finland now number some 400,000 and the Finns about 3,000,000.



THE SWEDISH DISTRICTS IN FINLAND

(The black areas indicate the parts of Finland where about nine-tenths of the Swedish population live)

The Finns indubitably owe their present cultural standing to the liberal-mindedness of certain Swedish Finlanders, who agitated for decades for the equal education of the Finns and for popular appreciation of Finnish literature. But at least one of these champions of things Finnish went beyond the bounds of nationalism and earned slight gratitude for himself from the Swedes in Finland. This was Johan Snellman, who in the forties, in his journal, *Saima,* advocated the Finnification of the Swedes themselves, making Finnish—a language related not to the Scandinavian but to the Hungarian—the sole national language. Since that time this aim has taken on an increasingly political character and gained tens of thousands of adherents—among the Finns.

Fortunately the Swedes have been able to hold their own, in spite of Russia's greater leaning towards the more obsequious Fennoman party. Even before the downfall of the Czar, the Swedes had many separate institutions of learning, and had gained divided attendance at others. Last year the Swedes founded, or rather refounded, a second college at Åbo, the old capital, thus actualizing a long-cherished dream.

It must be said, however, that the Fennoman cause has not abandoned the idea of a linguistic triumph, or near triumph. In the light of historical instances, it will be a hard thing to attain, especially if Sweden herself manifests, more, to be sure, on cultural than on ethnic grounds, an active interest in the fate of her children in Finland. The Swedo-Finlanders, especially those of the western coast, shed proportionately far more blood in last year's civil war against the Reds than did the Finns; their political prestige has grown thereby, if not their hopes for recognition in their own country of their Swedish nationality. They are beginning to clamor for a separate school system, and for separate cantonal governments, to be united into one bishopric.

In all fairness, especially in case of expostulations from Sweden, the Fennoman party ought to remain content with its own Swede-born advancement and award the patriotic Svecomans a federative administration. Constitutional guarantees for their nationality and language are what the Swedes in Finland deserve; quite as much as the Swedes in Sweden, who certainly made strenuous objections some centuries ago against assimilation by their Danish cousins. Retention of Åland, a strong national organization, Swedish moral support, and intellectual as well as material commerce with Sweden are the legitimate demands of a doughty people.

AN ARGENTINE VIEW OF AMERICAN UNIVERSITIES

THE fundamental differences existing between the universities of Argentina and those of the United States, in their general outlines, are presented by Señor Ernesto Nelson in *Estudios,* a monthly review published at Buenos Aires.

While recognizing the practical inferiority of the Argentine universities, and admitting that those of the United States represent in the main a realization of his ideals, the writer does not think that a mere grafting of their forms on the Argentine stock would have a satisfying result. The trouble lies deeper, in the essential character of the Argentine system, and proceeds from the direct intervention of the state.

The European conception of a university figures it as an organ of the state, and this is fatal for the popularization of culture; but the Argentine Republic, at its formation, committed the error of preserving social institutions which were in conflict with the free political institutions that were adopted, and it is now experiencing the evils of this system.

What is of prime importance to-day is that both the rulers of Argentina and the youth of the country, upon whom rests the task of social reconstruction, shall clearly perceive the causes of the crisis for which provision must be made, and that those who take up this work shall do so with minds freed from the work of all prejudices, that of admitting blindly the logic of the existing order of things. For this order of things, the right of the state to possess a monopoly of university culture, is precisely the cause of the troubles, as can be proved by a comparison between the universities of the two Americas divided by the Rio Grande.

In Argentina, the writer remarks, the state considers that it should be the guarantor of the physicians, engineers, lawyers, and professors, since the mere possession of a title constitutes a privilege that opens up the path to renumerative positions and assumes social and political prerogatives. Hence, for the state the higher culture is technical efficiency, and it would be a useless task to expect to find in these state universities any place for those admirable faculties of liberal arts which in the United States fill the soul of the Latin American with regretful longing. They do not confer a professional but a cultural title, while the student has a choice among an immense number of elective courses covering the widest field.

Another defect that the writer notes in Argentina is the absence of lectures by men who can speak authoritatively on questions not necessarily professional, while in the United States such lectures are accorded a prominent place in the department of liberal arts. For this reason this branch of the university occupies a leading place, and attracts the largest number of students, and the primacy of culture over professionalism influences the idea that the public forms of higher education. This ceases to be only a means of acquiring a professional title, and becomes an epoch in the intellectual development of the individual, and the students flock to the universities, not to secure a diploma, but to live in the atmosphere best fitted for a young man between eighteen and twenty-five years of age.

Thus it is that while in Argentina the purely cultural branches seek to take on a professional form in order to make their way into the university, the reverse is the rule in the United States, where a narrow professionalism is regarded with disfavor, and the candidates for degrees in law, medicine, mathematics, etc., are led to follow some literary, historical, or philosophical course as an antidote, the choice of the particular course being left quite free, so that it may be better in accord with the special vocation that has been selected.

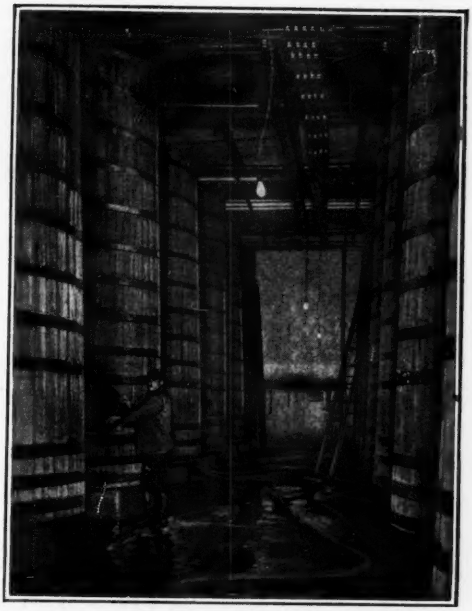
From this free play of individuality there results an enrichment and a diversification of the student's fund of information that cannot fail to have its effect upon the general level of culture, increasing its efficiency. As pure light on traversing a prism spreads out into the various colors of the spectrum, so the light of science reveals all its splendid diversity when emitted by the master minds entrusted with the task of its dissemination. The example offered by the universities of the United States moves Señor Ernesto Nelson to declare that the cause of higher education in Argentina demands the enactment of a law severing the ties that bind the university to the state, one which shall give the right to found new universities, and shall assure to each of these a subvention proportioned to the number of its students.

WHAT WILL BECOME OF THE BREWERIES?

THE manufacture of malt liquors in the United States represents an invested capital not far short of seven hundred million dollars, or did at a recent date. What does the cataclysm of nation-wide prohibition mean to the owners of this enormously valuable property? This question is obviously one that interests not only the owners of breweries, but the country at large. It is an economic question of importance.

In the *Popular Science Monthly* (New York) Mr. H. E. Howe, a chemical engineer connected with a large firm of industrial chemists, points out various ways in which the brewers may adapt their plants to the new conditions. Apparently but little has yet been done in this direction. While some breweries have made radical changes in order to maintain their earning capacity, others are preparing to quit business, and there are some brewers who believe that post-war legislation will permit them to brew 2 per cent. beer and accordingly are preparing to keep their property in condition, at considerable expense. The writer says:

> It has been difficult at times to make those concerned appreciate that virtually every brewery presents a different problem, so far as its use in new fields of endeavor is concerned. There may be a class of work that most naturally fits in with brewery equipment, but raw materials, market, competition, location, and other such factors must be considered. The problem often involves more of economics than of science.
>
> The modern brewery is especially designed for a particular set of operations. This is not well suited, of course, to other uses. Breweries require height out of proportion to floor area from the view-point of other industries. The foundations will seldom carry additional weight on the upper floors; for, with few exceptions, the heavy portions of a brewery's equipment are on the lower floors, if not indeed on the ground.
>
> The power plant will probably require important additions for any new work, although this may be confined to the boiler-room. The refrigeration equipment may prove useful, while the bottling and labeling machinery will often remain unused.
>
> A brewery is fortunate indeed if more than a portion of its building and mechanical equipment can be put to work on unfamiliar products, or if more than a limited amount of new apparatus is required. The ideal would be a profitable product to be made with little change in plant, by methods differing as little as possible from those already in vogue. This is seldom approached.



IMMENSE STORAGE CASKS BUILT FOR AN AMERICAN BREWERY

(These casks cost $5000 apiece when lumber was much cheaper than it is now. A large brewery had a hundred or more in its cellar)

Brewers who have already embarked upon new enterprises have, in a great many cases, stuck to the raw material with which they are most familiar—malt. Important malt products include malted milk, malt syrup, maltose and malt flour. A certain Colorado brewery installed dairy machinery and undertook the manufacture of malted milk, while a part of its capital was diverted to the ambitious task of developing a porcelain industry, which presently measured up to the best German standards. The dual experiment has been a pronounced success.

> Malt syrup is being made by six or eight concerns formerly in the brewing and malting industry, and thus far the demand exceeds the supply. One producer makes 12,000,000 pounds a year, and is sold to capacity four months ahead. Success in manufacturing malt syrup and maltose, which is malt sugar, depends on the purity of the carbohydrate raw material, as well as care and control in filtering, clarifying, and concentrating operations. Much fine malt syrup is made from barley; corn-starch is the starting-point in other plants. The product competes with corn syrup and table syrup made from cane. It is considered one third sweeter than corn syrup, and has an advantage of not requiring the addition of cane syrup to make a high-grade product. It

can be made of good color, has a distinctly pleasing taste, and is a valuable supplement to our sugar supply. It makes superior hard candy, is used in crackers, bread, etc., and enters into many foods. As an article for export it finds a ready market in England for the production of beer, etc.

Malt flour is thus far little known in the cereal market. As the name indicates, it is made by grinding malt between rolls and sieving the flour to remove any husks. Being very hygroscopic, malt flour presents some minor difficulties in package selection for storage and transport, so that it may be found better to extract it with cold water, and after filtering concentrate the solution to a paste.

According to C. A. Nowak, these malt products impart valuable characteristics to bread, especially those made from strong, harsh flours. The flavor is improved, and the bread dries out much more slowly and is more easily digested. The malt also feeds the yeast, and so shortens the time required for fermentation. No doubt some educational work will have to be carried on to encourage a wider use of such malt products, but this is the case with every new material.

According to Mr. Howe an attractive field for research and exploitation is offered by yeasts, with which brewers are already more or less familiar. Special yeasts might be developed as a source of valuable extracts for human food and also for use in the preparation of stock foods. Compressed yeast may also be made.

In dairy districts the brewery may become a factory for milk products, which are varied as well as numerous. They include lactose, casein, butter, and cream. There is always an opportunity for a distinctly flavored cheese, while many believe this war will establish dry milk in our list of foods, just as the Civil War intrenched condensed milk. Specially fermented milk beverages improving on buttermilk should also be considered.

Other interesting possibilities include the hydrogenation and the refining of oils, the dehydration of fruits and vegetables, the bottling of fruit juices, the manufacture of various soft drinks, canning, ice manufacture, and so forth.

A GOVERNMENT CORPORATION FOR AIR TRANSPORT

THE immediate future of aeronautics in America is giving a great many people serious concern. The opinion is widely and strongly expressed that the United States Government must find means of turning to account the immense amount of aeronautical material that it has acquired during the war and giving employment to the host of men that have lately been trained for flying and for the other activities connected with the use and manufacture of aircraft. The development of peacetime aeronautics is proceeding apace in Europe. Our authorities must act promptly if they are to keep alive the infant aircraft industry in this country and give our nation a respectable standing in the coming rivalry of the air.

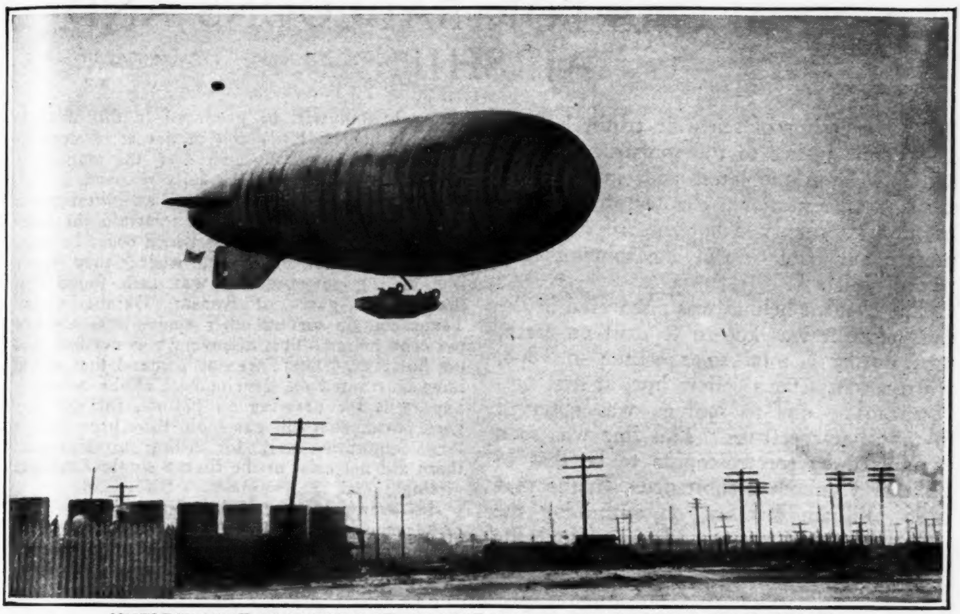
According to Mr. Alan R. Hawley, president of the Aero Club of America, whose remarks are published in the *Aerial Age Weekly* (New York):

There are three leading aeronautic problems of national importance to be solved, as follows:

(1) The U. S. Army, according to the Senate report, spent in the last two years $1,672,000,000 in aircraft, parts, aerodromes and aeronautic equipment of different kinds. The Navy spent approximately $250,000,000 for aeronautics. Since these figures were made public the figures may have changed somewhat through cancellations of orders. But it is a fact that the Army Air Service has thousands of aeroplanes, about 20,000 Liberty motors, about 7,000,000 yards of aeroplane linen, 30,000,000 feet of aeroplane spruce and general equipment and accessories for sale, for which the Government has paid about $800,000,000. The Air Service has, besides, thirty aerodromes and aviation and balloon depots, two-thirds of which, according to reports, will have to be abandoned at a loss of tens of millions of dollars. The Navy, also, has a substantial lot of aeronautic equipment to dispose of.

(2) The Army and Navy have a total of about 30,000 aviators and balloon pilots in service, each of whom cost not less than $10,000 to train, and about 300,000 motor and plane skilled mechanics and other trained assistants. A few thousands of the pilots have already been demobilized—and they are looking for positions. The first few thousand mechanics who were demobilized found positions elsewhere. The rest are also looking for positions. The Aero Club of America and the Aerial League of America and the aeronautic publications, *Flying*, *Aerial Age Weekly* and *Air Power* are flooded with applications for positions. The Peace Program of the Army and Navy plans to use less than 2,500 pilots and less than 15,000 men. The Army Bill, now before Congress, limits the Air Service to less than 2,000 commissioned officers. The Navy Bill, now before Congress, provides for the retention of only 350 aviators in the Navy, out of the present 10,000 aviators in service.

(3) Now that we have aeroplanes capable of carrying fifty passengers and dirigibles capable of carrying 80 tons of useful load, and it is a



NAVY DIRIGIBLE COMPLETING ITS 1500-MILE VOYAGE FROM NEW YORK TO KEY WEST

common occurrence for aircraft to fly 600 or 800 miles across country between sunrise and sunset, it is necessary to draft regulations to govern aerial navigation and air traffic.

The third problem is a complex one. A large body of laws and regulations, including international conventions, will need to be drawn up in the near future. In solving this problem all countries will profit by the suggestions set forth at length in the report of the Civil Transport Committee, recently established in England.

A plausible solution of the first and second problems, proposed by Mr. Hawley, would be

to organize a Government Aerial Transport Corporation, similar to the Grain Corporation, which shall take over and use for aerial transportation all the aeroplanes, motors and equipment not needed by the War and Navy Departments. The Grain Corporation, it will be recalled, was capitalized at $50,000,000, all the stock being owned by the Government. It was operated by a civilian board of directors, who knew their business and were not hampered in any way by official red tape. This board purchased, distributed and transported all grain during the period of the war and was successful in every way and met with general approval.

This Aerial Transport Corporation would undertake to utilize the aeroplanes, motors, equipment and aerodromes to the best advantage and to the best interests of the Government.

There are 380 cities in the United States that have asked the coöperation of the Aero Club of America and the Aerial League of America to establish air lines to carry passengers, express and mail.

It would be a great advantage and would relieve railroad congestion, if all first-class mail could be carried by aeroplanes. The Post Office is ready to establish aerial mail lines throughout the country and needs hundreds of twin motored aeroplanes to carry this plan into effect.

Aerial ferries could be established on waterways throughout the United States. Aerial ferries across Long Island Sound, from Newport to Block Island, Cape Charles to Norfolk, Key West to Havana, across the Mississippi, etc., and air lines could, in fact, be established wherever there are waterways, as well as between cities on land. These lines would only be established where there are no such lines operated by private interests and, if it is thought best, the lines once in operation, or the equipment for operating the lines, can be sold to private interests. Likewise, the 30,000,000 feet of spruce and 7,000,000 yards of aeroplane linen, and the tons of castor beans could be sold when the opportunity occurs. It would be wiser to use this material rather than sell it at a fraction of its cost which would create industrial or labor problems by swamping the market.

To establish these air lines or to supply suitable planes to the Post Office, it would probably be necessary to get larger or special aeroplanes. These could be manufactured by established manufacturers, using the Liberty motors, the aeroplane spruce, wheels, wire, turnbuckles, instruments, etc., which the Government has on hand.

In other words, this corporation would be the clearing house in charge of utilizing the $800,000,000 of idle aeronautic equipment to the best advantage and best interest to the country.

Mr. Hawley enumerates the many ambitious undertakings in commercial and civil aeronautics now in operation or projected.

A NEW GAS FOR BALLOONS AND AIRSHIPS

NO expositor of scientific truths has yet done justice to the romantic story of helium. Even the latest and, in some respects, most sensational chapter of this story has thus far been told but cursorily. Let us preface our quotation of the contemporary record with a brief retrospect.

The element helium was discovered in the sun before it was known to exist on earth, viz., during a total solar eclipse in 1868, when a conspicuous yellow line, at first supposed to be due to sodium, was observed in the solar spectrum. This line was soon recognized by spectroscopists to be that of a hitherto unknown substance. In the year 1895 William Ramsay, on examining the spectrum of the mineral clevite, found the yellow line of helium, and thus proved that it occurs on our planet. Later it was found to be one of the rarer gases of the atmosphere, of which it constitutes about 0.0004 per cent. by volume at the earth's surface. One of the most remarkable facts about helium is that, although an "element," it is produced from the element radium and from the radioactive elements actinium and thorium. In 1909 Kammerlingh Onnes achieved the remarkable feat of liquifying helium. In order to become liquid, its temperature must be lowered to 268 degrees centigrade below the freezing point of water—only 5 degrees above "absolute zero." This is but a very fragmentary account of one of the most curious and mysterious substances known to science.

On the practical side helium has recently proved to be of immense interest by virtue of two qualities; lightness and non-inflammability. It is the lightest known substance except hydrogen, and, as it has no chemical affinity for any other element, it cannot be burned. How these qualities have been turned to account is thus reported by Baron Ladislas d'Orcy in the *Scientific American*:

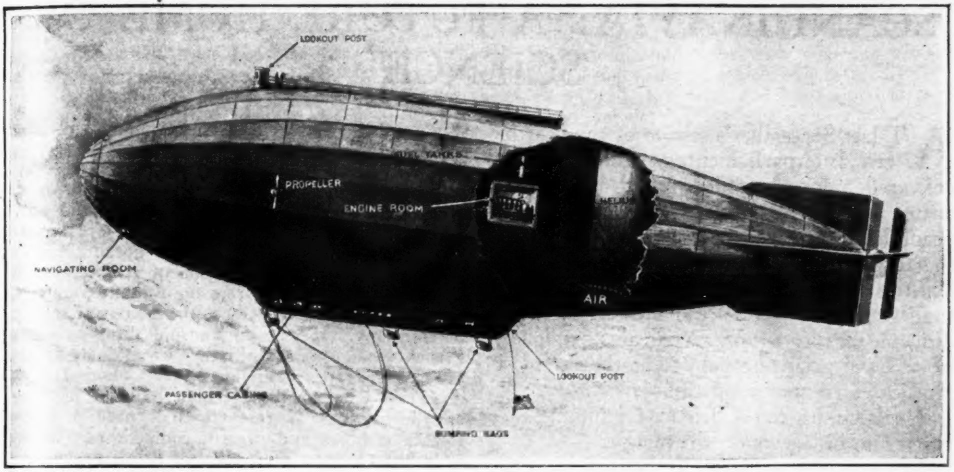
Helium, an inert, non-inflammable gas, the second lightest known (the lightest being hydrogen), is relatively abundant in all minerals which contain radium, thorium, or uranium, such as thorianite, cleveite, etc., but the operation of separating helium from these minerals has involved such a great expense—from $1500 to $6000 *per cubic foot*—that its use as a hydrogen substitute was never seriously considered until the war. When it is considered that by next spring helium will be produced in this country on an industrial basis and at a cost of approximately $100 per 1000 cubic feet, the magnitude of the achievement will be fully realized.

Shortly before the Great War an investigation was made in this country to ascertain the composition of the natural gases which occur in large deposits in the Southwest, where they serve illuminating purposes. It was then found that the natural gases of Kansas, Oklahoma and Texas contain among other components about 1 per cent. helium. This discovery was not followed up, however. There was no demand that would have warranted the development of the necessary apparatus for drawing off helium, for the very good reason that this gas could have been used in large quantities only for filling airships—and there did not exist at the time a single American airship.

However, when the United States declared war on Germany, the British Air Board called the attention of the American Government to the fact that one of the important contributions this country could make toward winning the war would be the industrial production of helium. The problem was promptly taken up by the Bureau of Mines and the Aircraft Board, as a result of which an experimental plant was constructed on original lines, while each of two companies engaged in the production of liquid air was induced to build a plant to its own designs. All three plants are now in operation, but that developed by one of the air products companies has so far given the best results, and it is only fair to say that the solution of the whole problem is almost exclusively due to its efforts. A large production plant, to cost about $2,000,000, is now being built for this concern at Fort Worth, Tex., by the Bureaus of Steam Engineering and Yards and Docks of the Navy Department, and will be operated by that firm for the Navy, which alone uses airships in this country.

Helium is somewhat less buoyant than hydrogen, hitherto universally employed for filling balloons and airships. It will lift about 65 pounds per 1000 cubic feet, as against 70 pounds for commercial hydrogen. But

The existence, underneath hundreds of thousands of cubic feet of hydrogen, of internal combustion engines occasionally emitting flaming exhaust gases, not to speak of the presence of gasoline tanks, has ever been a source of worry to airship pilots—while it seemed a poor inducement to prospective aerial travelers, notwithstanding the comparatively safe record of the Zeppelin excursion line. Considerable progress has been made, it is true, in enclosing the engines and screening off the exhaust collectors, but the risk was still latent, because even the best balloon fabrics are not wholly gas-tight and a small quantity of leaking hydrogen would, under certain conditions, suffice to cause disaster.



AN ARTIST'S CONCEPTION OF THE PASSENGER-CARRYING DIRIGIBLE OF THE NEAR FUTURE, MAKING USE OF HELIUM GAS

A further element of danger was introduced in that rubberized fabric becomes self-electrified in dry air, and emits sparks when creased in any way—for instance, owing to a loss of tautness of the gas bags.

Moreover, hydrogen when mixed with a certain proportion of air is violently explosive, while helium, being chemically inert, is not explosive at all. The combined danger of fire and explosion limits the utility of the hydrogen-filled airship even in time of peace, while these dangers are, of course, greatly enhanced by the conditions of warfare.

The substitution of helium, by removing these disabilities, bids fair to revolutionize air navigation. The engines of the future airship can be safely placed inside the shell of the balloon, instead of being suspended underneath, and a much more efficient vessel will thus be produced. Baron d'Orcy declares that "the major, if not all problems, of aerial transport will in the near future be solved by the airship, and not by the airplane."

For commercial purposes the airship is superior to the airplane in the matter of security, reliability of the power plant, loading efficiency, comfort, prime cost per pound of load carried, and man-power required for operation. It is inferior to the airplane only with respect to speed.

While an airship can stay aloft regardless of engine stoppage (accidental or voluntary), a failure of the airplane's power plant necessitates an immediate descent in gliding flight. This feature furnishes one of the most serious objections to the use of the airplane as a passenger-carrier, for a forced landing is not very pleasant to visualize when occurring on vast stretches of wooded or mountainous country, or the Northern Atlantic in mid-winter, for example. If a fog bank covers the aerodrome, an incoming airplane will have to fly round and round until the fog clears away—or the fuel supply gives out; under the same circumstances an airship will stop its engines and hover until a landing can safely be effected.

The superiority of the airship over the airplane in affording security to passengers under the most difficult operating conditions is thus manifest. A Zeppelin-type airship, in which flotation is secured by 20 or more separate gas-bags, is fully comparable as to safety to a steamer fitted with watertight compartments. Just as a steamer may spring a leak and have several watertight compartments flooded without sinking, so can a Zeppelin maintain its buoyancy even if several of its gas-bags should be pierced. Injury of this sort may, by the way, be mended in flight, because balloon fabrics can be patched like automobile tires; it follows that airships of the rigid type have little fear of accident on this score.

Not only is the question of weight of minor importance on airships; the whole architecture of these craft is more adaptable to comfort than even the large airplane. It is obvious that a hull some 700 feet in length affords a splendid opportunity for fitting cabins, dining rooms, lounges, etc., at such a distance from the propelling apparatus as to virtually suppress in the living quarters any noise caused by engines and airscrews; furthermore, the engines may be effectually silenced, and, as the number of exposed wires is almost nil on rigid airships, the monotonous whistling of the wind due to the vibration of wire stays—so notable on fast airplanes—is also done away with.

Then there is the possibility of having a spacious promenade deck atop of the hull, which should prove a great inducement for long distance trips. All this installation is difficult to conceive on airplanes, where noise, vibration and restricted space are prominent features.

SCANDINAVIA: A FUTURE HOME OF SCIENCE

AT last September's session of the Northern Interparliamentary Congress was delivered a long-heralded report by a committee formed to consider the question of Scandinavia as a center of scientific work in the future. The report, dealing with probabilities and practical means anent this eventuality, aroused widespread interest in Scandinavia. Prof. Svante Arrhenius, recipient of a Nobel prize and held to be the foremost physicist-astronomer of to-day, gives in the latest issue of the Christmas annual, *Julstämning,* his views on the matter.

In the light of what he calls the forthcoming "nationalization of science," the scientific institutions of Scandinavia will be called upon to perform a mission of universal moment.

The exceptional rôle of science during the war is far from being played out, though its direction will naturally shift to the production of instruments and goods essentially of peace, including, however, much of the raw materials consumed by the eager demands of warfare. The restoration of regions laid waste, the vast need everywhere for consumable necessities, and the simultaneous exigencies of economic readjustment and trade rivalry will crave the same efficiency, the same exploitation of scientific brains in the several countries recently at war, as during the conflict itself. Technical schools, too, will arise in growing numbers under government supervision and will thrive as never before.

It is almost unthinkable that the Scandinavian countries will keep out of this great movement, which constitutes a transfer of the war to the fields of industry and trade. But it will also present an opportunity to introduce a new and more idealistic direction in scientific work among the neutral states—unfortunately small and few. The rapid development of science during the last hundred years has depended on its international character. Whatever improvements or discoveries were made in one country were soon known to all the rest of the civilized world. This most advantageous work was accomplished by international technical journals, contributions from which were sent from all over the world. Still greater was the influence of those educational institutions whose doors were open to students of research from all lands. There one learned the most recent scientific tendencies of the day among all culture-lands and came to know the newest and best industrial methods applied there.

It is well known that Germany assumed leadership in this sphere. And to Germany streamed crowds of studious youth from all over the globe, especially from Russia, the Balkan States, England, America, and Scandinavia. There most of the international organs were edited and published. Through the war a sudden break was made. And it will perhaps take decades before the stream of foreign students of science, which came for the most part from the Entente countries, gradually retraces its way to the abodes of science in Germany. It was an unusual thing to see a French student in Germany even forty years after the Franco-Prussian War. Besides, it is uncertain whether the German halls of learning and institutions of research will readily admit former enemies and present competitors. Moreover, the German journals will in all probability have to wait long for contribution from the countries which have been fighting Germany. Everything will be nationalized, even science.

This is where great new possibilities lie open to the neutral states. Their young scientists can get their training wherever they wish, and will be welcomed as the only mediators in behalf of science in a rivalizing world. After they have seen to their education in the best possible way they will come home and apply their experiences in our own and other neutral seats of learning and fields of research. There also young investigators from all countries will assemble to acquire knowledge of important innovations in many quarters, even those who come from formerly belligerent states. In this way the pick of the world's scientific youth will gravitate towards the learned institutions of the neutral countries.

Thus the neutrals will under the circumstances be given more than their proportionate share of scientific production and education, in a world where such production and education will for a long time to come be elevated in an unwonted degree. The work of Scandinavian scientists will likewise receive wider publication than has heretofore been the case.

Thereby their work will acquire that importance which is impossible of attainment without active collaboration with foreign scientists. Even purely material advantages will follow from this immigration of foreigners. They will come to know and esteem the country where they have enjoyed hospitality and gotten the knowledge necessary for their development. They will act as promoters of this country's interests and make its institutions and products known wherever they go. Gainful industrial and trade connections will also be established.

An active and well-organized coöperation between the Scandinavian countries will by all means contribute to a good result. We have every reason to hope that the authorities concerned will in all possible ways seek to promote

that international movement which through unavoidable necessity will drive seekers after knowledge to our shores. . . . If we in addition could establish some international journals in Scandinavia, it would be of the greatest benefit to research work here and to our scientific mission.

It is in any case certain that scientific research and assiduity in the Scandinavian countries will in time to come meet with vigorous prosperity, the possibilities of which will in all likelihood be utilized in a wise and far-sighted manner by our people.

SVANTE ARRHENIUS, MASTER THEORIST

PROFESSOR SVANTE ARRHENIUS was sixty years old on the nineteenth of February.

The great chemist and cosmologist was born near Upsala, Sweden, in 1859. His father was superintendent of parks in that city. He was precocious as a boy, especially in his mathematical, physical, and biological studies. In 1876 he entered the University of Upsala. In the years 1881-83 he collaborated with Professor Edlund in the study of the conductivity of electrolytes in various kinds of solutions. In 1884 he became instructor in physical chemistry at Upsala after receiving his doctorate in physics. His thesis comprised the results of his studies with Professor Edlund, and aroused widespread interest, especially in Germany.

The following years found him in Germany. Working at the laboratories of Kohlsrauch, Boltzmann, Ostwald, and van't Hoff, he formulated the theory of electrolytic dissociation in 1887. In 1891, the young scientist received a call to the University of Giessen, consequent upon his rapid and unopposed success. He refused the offer, accepting instead a position as instructor in Stockholm College, where (largely through the influence of foreign scientists) he was appointed professor in 1895. In 1897 his colleagues elected him to the rectorship (presidency), which post he yet holds.

Becoming interested in the electro-chemical aspects of serotherapy, he spent the years 1902-3 at the serum institutes of Denmark and Prussia. Shortly thereafter, in 1903, he was awarded the Nobel prize in chemistry —being the first Swede to receive one of those prizes. In 1905 he became director of the Nobel Physical Institute.

Dr. Arrhenius is a man with a singular wealth of ideas and a remarkable capacity to apply himself to various branches of science. He has attained distinction not only as chemist and physicist, but also as geo- and astrophysicist, meteorologist, phys-

DR. SVANTE ARRHENIUS, THE GREAT SWEDISH SCIENTIST

iologist, etc.; directing his theories not into single, but many paths. He is in addition the author of several textbooks in those provinces of science wherein he has busied himself. Of late years he has adverted chiefly towards cosmology, as is evinced by the titles of his latest works: "Worlds in the Making," "The Life of the Universe as Conceived by Man from the Earliest Ages to the Present Time," and "The Destinies of the Stars."

He caused a sensation some years ago by his arguments over the nebular theory as applied to the Milky Way. He is also the foremost advocate of the theory of cosmic pan-spermatism, which holds that omnipresent spores, fully capable of survival in the intense cold of space, wander over immense distances under the pressure of light, and give rise, under favorable circumstances, to various forms of life on the planetary bodies intercepting them.

THE CRADLE OF THE WORLD?

ALL of us like to gratify our sense of curiosity, and now comes Dr. Joseph Beech, who offers us a peek into the backlands of China. He comes with strange tales and experiences covering a period of twenty years, and were it not for his reputation as a missionary perhaps one might be tempted to liken some of these mysterious stories to those of Jules Verne, or Sheherazade.

Having visited sections of western China where the foot of white man had never before trod, he told in New York, according to the *Sun*, how he had encountered in the foothills of the Himalayas forty or fifty different tribes; actually saw a race of white men who resembled Bohemians; found a race of four-foot dwarfs, and was amazed at the variety of peoples in this cradle of the world.

The fighting white men of Sung Pan, which is ten days' journey northwest of Chengtu, a distance of only 300 miles, are the people of greatest interest, and Dr. Beech goes on to say of them:

> This tribe, resembling Anglo-Saxons, was described to me as consisting of large, furious men, whose bravery is considered somewhat of a marvel to the Chinese. "They never run away, any more than you [meaning Americans and Europeans] do," my Chinese friend told me. "They love to fight."

SURVIVAL OF CHIVALRY?

> I was told the men often fight duels on horseback, which in some respects recall the duels of the Middle Ages. The duelists start the fight with a discharge of short blunderbusses. These are so heavy they have to rest them on a wooden cross attached to the saddle bow. I judged they were made by native workmen and rather inefficient weapons, hurling a handful of slugs.
>
> The second stage of the duel is fought with stones, of which each has a bag. If the bags are exhausted without doing serious injury to either man, the duellists draw nearer and throw spears tied to the ends of ropes so they can be pulled back and thrown again. Meanwhile the two horsemen are circling around and constantly getting closer.
>
> In the final stage the antagonists ride up to each other and fight hip to hip with great swords, after the fashion of Richard the Lion-Hearted. The duel always goes to a decision, my Chinese friend told me.

On the border between China and the country of this tribe Dr. Beech saw an enormous castle, built many centuries ago along medieval lines, and capable of holding thousands of soldiers, stretching over the hills for some distance. The old flags on the four little turrets of each tower have now been supplanted by the Buddhist emblems of the Llamas. And in the hills nearby he passed numerous great battlefields of past centuries, marking with thousands of tombstones the graves of heroes long dead in the defense of the tribe domains against the Chinese.

One tribe looks like Tibetans, but speaks a different language and disclaims relationship. Another resembles the Chinese, but differs widely both in language and customs. In speaking with the tribesmen through interpreters, Dr. Beech learned that all of these tribes have traditions of greatness, and that they had once controlled a vast territory; were driven back to smaller domains; and finally beaten back again to the mountains.

A CONQUEROR'S BREED

> It is interesting to speculate how much truth there is in these traditions. We know most of the races of Europe came in successive waves of migration out of the depths of Central Asia. It is natural to suppose that each migration would leave some of the same people behind and this remnant would flee into one of these mountain valleys if attacked by superior force. A little to the north of this country the greatest conqueror the world has known, Genghis Khan, arose, and other historic conquerors are believed to have originated hereabouts.

The total population of these tribes is unknown, but estimates run from 4,000,000 to 10,000,000 people. The signs of ancient civilization, as well as the people themselves, invite a good deal of speculation, and perhaps some traveler will find in them the Lost Tribes of Israel, for Dr. Beech says:

> In some parts of the country I saw a style of architecture like that of Palestine, with flat roofs. The tiled roofs and other characteristics of Chinese architecture were entirely absent.

High on a mountain-top, surrounded by peaks ranging from 6000 to 18,000 feet high, and overlooking these valleys of the Kwanlung Mountains, Dr. Beech once spent the night in a king's palace, which is in the heart of a country rich in undeveloped resources. Five men joining hands cannot span some of the trees in the immense forests. Who knows but that, in the great palace on the mountain top, even the Queen of Sheba may have reigned? Certainly there are evidences of a bygone splendor that would rival if not equal hers.

NEW LIGHT ON THE EARTH'S AGE

THE old estimate of 100,000,000 years for the age of the habitable earth was a compromise between the ten to twenty million years on the one hand allowed by Helmholtz's theory of the maintenance of the sun's life-giving radiation by contraction and condensation, and by Kelvin's deductions from the rate at which the temperature of the earth's crust increases toward the interior, and the far longer duration, on the other hand, inferred by geologists from rates of sedimentation, erosion, and other slow actions.

The discovery of radioactivity in terrestrial rocks, less than twenty years ago, presenting a source of energy fully sufficient to maintain the earth's interior temperature, not only rescued the problem of the age of the earth from one of the difficulties in its solution, but provided, also, a new time-scale for geologic history.

The rate at which uranium breaks up into helium and lead is now known within a few per cent. By measuring the quantity of these end products and comparing with the quantity of uranium still present in the same material, data are obtained for measuring the age of the mineral and with it the age of the rock-formation of which it is a part. This line of evidence and that furnished by the thickness and character of sediments lead to estimates that life started on the earth at least a billion years ago.

Since the inception of life there has been no interruption in its existence. Astronomers are thus faced with the problem of explaining how the sun, whose energy has alone made terrestrial life possible, can have maintained its radiation through this great length of time with very little variation from the present rate of outflow. Apparently all known sources of energy, even with the help of radioactivity, are woefully insufficient to prolong the solar radiation to meet geologic requirements.

Dr. Harlow Shapley, after discussing the present state of the problem, in the October, 1918, number of the *Publications of the Astronomical Society of the Pacific,* makes an interesting application of his recent studies of globular star clusters. Astronomers have come to believe that the spectrum of a star is an indication of its stage of development, and reasonable conclusions have been formed of the order in which a star passes through the spectral types.

The life of man and of his present astronomical records were recognized as too brief to prove directly the change in spectrum as stars grow old, but the continuous gradations from type to type, combined with extensive information as to motions and brightness and chemical nature, left little doubt that, given time enough, a typical star will progress through many of the spectral stages now observed as essentially static.

Eddington has computed that all known sources of energy will operate to make a gaseous giant star pass in 100,000 years through all stellar spectral types, from a state of highest rarefaction to a condition in which it can no longer be considered as a perfect gas. The evolution of far-advanced stars such as the sun would presumably proceed much more slowly. By several trustworthy lines of reasoning Shapley has found that the globular star clusters are enormously distant from us. For the six clusters selected, the distances from the earth are given in terms of the time required for the transmission of light across intervening space:

Cluster		Distance
Messier	22	25,000 years
Messier	13	35,000 "
Messier	5	40,000 "
Messier	3	45,000 "
Messier	15	50,000 "
N. G. G.	7006	220,000 "

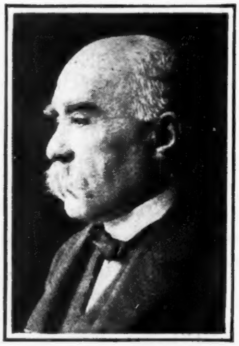
Granting that it is highly improbable that the actual time of origin of these clusters is in any way dependent upon distance from the earth, we readily realize that, as seen from the earth, the first cluster in the list is twice as old as the fifth, and nearly 2000 centuries older than the last. If, as the theory which recognizes all known sources of energy predicts, the change from a giant red star into a giant yellow star takes but 25,000 years, we should find evidence of such changes in the study of these globular clusters. Counts of stars, however, show that all six clusters contain stars of the various colors in the same proportions.

This similarity of color in clusters of such different ages must apparently be taken as evidence of very slow evolution, giving comfort to the geologist and countenance to his assumption of very little change in the sun's radiation during the time required for a reasonable interpretation of geological record. The problem of the slow development of suns, of the storing up and releasing of their observed energies, still remains. We must seek new properties of matter.

CLEMENCEAU—LITTERATEUR

THE important part played by Georges Clemenceau in French political life has been accentuated by his activities in the great war. His indomitable energy—at an advanced age; he is seventy-eight—his ceaseless activity, his striking ability, have aroused a general, wondering admiration. That he should add to his shining qualities as statesman the literary gift and the gift of eloquence is certainly worthy of comment.

The *Revue* (Paris) contains an interesting characterization of the Premier's literary efforts, by N. Ségur. As illustrative of Clemenceau's style and mode of thought, he gives a number of quotations from his different productions.



PREMIER CLEMENCEAU, WHOSE LITERARY WORK IS HERE DISCUSSED

The French Academy, says the writer, has consecrated the unanimous acclamation of the nation by electing as one of its members the man, perennially young, who above all others deserves well of his country. And since he occupies the academic chair not only as a contributor to victory but as a writer as well, it is worth casting a glance at his literary work and indicating its leading tendencies.

He has through a long life ardently run the gamut of human sensations, thrown himself heart and soul into the midst of every fray. In turn, doctor, journalist, dramatist, philosopher, politician, Cabinet minister, Northern by temperament, thoroughly Southern by his vivacity of thought, Clemenceau has excelled in every field of human endeavor.

Though a litterateur, Clemenceau is primarily a man of action; pen in hand, he continues to expend his energy, and the form and content of his writings show his ruling passion—to act, to combat, to assert himself. His style, rapid, nervous, at times negligent, but always racy, vibrant, imaginative, is another indication of his impassioned ardor.

It is ideas, to be sure, which interest him most; he is mainly concerned in discussing political and social problems. However, he does not disdain fiction or descriptive writing; in his two collections of tales we find picturesque and realistic scenic portrayals. But he specially delights in depicting the simple life of the peasants of the Var and the Vendée.

As he is a born fighter, he excels, likewise, in social satire, where his impetuous temper, his distinctive talents—more vigorous than delicate—appear most marked. What specially characterizes him as a writer is his eloquence. He is eloquent everywhere and always. But it is of ideas that he is particularly enamored. It is his wide knowledge and interests which enable him to discuss with equal ability Mycenian art, French Impressionism, Edmond de Joncourt, Tolstoi, or Shakespeare.

But in reality his true vocation is to fight in the political and social arena.

In his two works of synthetic history, *La Mêlée sociale* and *Le Gran Pan,* which are, after all, his most important works, he treats superficially it may be, some of the leading problems of our time. It is a lesson in Socialism, a lesson in fraternity, which concludes the introduction of *Le Grand Pan.*

If in summing up we try to define the leading thought which has thus far animated M. Clemenceau's efforts, we find it is a thought, more generous than original, of individual activity and social fraternity. To act, to work, to fight in order to fulfil one's own destiny and aid one's brethren—that is, I believe, M. Clemenceau's creed.

His thought, too passionate, even somewhat utopian, is but a modern continuation of that of the eighteenth century philosophers, and seems to be based—as Taine said of the philosophy of Rousseau—upon the consideration of a theoretical and abstract being.

Yes, M. Clemenceau, as writer, belongs to the high-strung, mystically humanitarian line of the Enclypedists, and while his acts as a statesman are marked by such a clear sense of reality, his writings, despite their scientific seeming, are a reproduction of the generous dreams of the eighteenth century.

And we may conclude by saying that more than any one the author of *Le Grand Pan* continues the French tradition. For, in fact, in pointing out in M. Clemenceau that union of exact action and idealist day-dreaming, we are but repeating, we may say, the definition of a Frenchman which he himself once formulated in dedicating the monument to Goblet.

THE NEW BOOKS

INTERNATIONAL RELATIONS

League of Nations: A Chapter in the History of the Movement. By Theodore Marburg. The Macmillan Company. 139 pp. 50 cents.

In the seething discussion of the several plans to achieve a League of Nations we should not lose sight of the fact that the movement to such an end in this and other countries had from the very outset the devoted service of a group of wise and highly trained leaders who had long been preparing for just this outcome. In America one of the initiators of the League to Enforce Peace was Mr. Theodore Marburg, of Baltimore, formerly our Minister to Belgium, who had been active in work for international peace for a number of years preceding the outbreak of the great war. In writing, as he does in this little volume, of the developments with which he has been personally connected Mr. Marburg is giving an admirable summary of the trend of the League movement in the United States. His book is strongly commended by Ex-President Taft and by other active leaders in the agitation.

MR. THEODORE MARBURG

League of Nations: Its Principles Examined. Vol. II. By Theodore Marburg. The Macmillan Company. 137 pp., 60 cents.

Very recently there has appeared a second volume by Mr. Marburg which considers in more detail the basic elements and human motive, as well as the philosophy of the League movement as a whole. He also examines and explains the failure of past leagues and meets the principal criticisms that have been advanced against the present project.

A League to Enforce Peace. By Robert Goldsmith. Macmillan Company. 331 pp. $1.50.

A popular exposition from the American standpoint of the principles on which the League to Enforce Peace has been organized. The discussion meets all of the familiar objections that have been urged by critics of the project, and while the working out of details is left to the Conference at Paris, the broader aspects of the scheme are clearly set forth. With its documentary material and bibliography and the introductory statement by President Lowell, of Harvard, the volume forms a most serviceable handbook for current use.

The League of Nations To-day and To-morrow. By Horace M. Kallen. 181 pp. $1.50.

A concise statement for the argument for international organization, with a concluding chapter written since the signing of the armistice. Dr. Kallen is the author of "The Structure of Lasting Peace," a book that has been widely recognized as a valuable contribution to current thinking.

A League of Nations. By Edith M. Phelps. The H. W. Wilson Company. 256 pp. $1.50.

A selection of the most important articles and documents relating to the League of Nations. This is a volume in the "Handbook Series," and, in accord with the purpose of that series, it reflects, impartially, the development of the idea, and states the arguments both for and against it. An extended bibliography of the subject is included.

Experiments in International Administration. By Francis Bowes Sayre. Harper and Brothers. 200 pp. $1.50.

A helpful record of the various attempts thus far made in the history of the world to secure international coöperation. The epoch-making treaties of the past—Munster, Utrecht, Vienna—are described, and reasons given for their failure. The author proceeds to outline three types of international executive organs, each of which is illustrated from history. From the records of these international agencies the author deduces conclusions regarding the chances of such organizations for ultimate success. The facts here presented have never before been brought together in a single volume. They have, of course, a direct and important bearing on the whole discussion of the League of Nations.

National Governments and the World War. By Frederic A. Ogg and Charles A. Beard. The Macmillan Company. 603 pp. $2.50.

This book is not merely an addition to the already long list of treatises on the theory of government. It undertakes rather to show how the governments of the several groups of nations are organized and how they actually work. More than one-fourth of the volume is devoted to an account of the processes of government in the United States, and this is followed by informing chapters on the governments of the Allied nations, as well as of the Teutonic states—the latter, of course, representing conditions prior to the general collapse of 1918. The two concluding chapters deal with "American War Aims in Relation to Government" and "The Problem

of International Government." The authors are both specialists in political science—Professor Ogg at the University of Wisconsin and Dr. Beard as Director of the New York Bureau of Municipal Research.

The State. By Woodrow Wilson. D. C. Heath & Company. 554 pp. $2.

Thirty years ago President Wilson, then a professor at Wesleyan University and lecturer at Johns Hopkins, prepared this statement of "The Elements of Historical and Practical Politics." For present-day use by students a revision has been made by Professor Edward Elliott, of the University of California. The chapters of a general character, dealing with the origin, nature, functions and objects of government and with the nature of law, are retained without change, as they are believed to represent substantially President Wilson's views to-day. New chapters on Italy, Belgium, Serbia, Rumania, Bulgaria, Turkey and Japan have been added, as has a chapter on "After the War."

World War Issues and Ideals. By Morris Edmund Speare and Edmund Blake Norris. Ginn and Company. 461 pp. $1.40.

A book of selective readings in current history. The materials, consisting of excerpts from books, magazine articles, addresses and speeches, are grouped under the following headings: "The Issues of the World War"; "The Atmosphere of the World War"; "The Spirit of the Warring Nations"; "Democratic and Autocratic Ideals of Government"; "The New Europe and a Lasting Peace"; "Features of American Life and Character"; and "American Foreign Policy." Helpful references for collateral reading are supplied by the compilers.

The Great Peace. By H. H. Powers. The Macmillan Company. 333 pp. $2.25.

This author's exceptional knowledge of European conditions, combined with a lively and forceful literary style, won for his earlier books, "The Things Men Fight For" and "America Among the Nations," a wide reading. Even those who disagreed with his conclusions were attracted by the brilliancy with which they were stated. The present volume, which was completed shortly before the signing of the armistice, is important as a statement of the terms of peace which the Congress at Paris has begun to work out. Mr. Powers bravely faces the difficulties that must be encountered in effecting the readjustments consequent on peace, and he makes no attempt to minimize them. The first half of the book is devoted to the general principles on which peace must be based and the second half to concrete problems.

The Only Possible Peace. By Frederic C. Howe. Charles Scribner's Sons. 265 pp. $1.50.

Dr. Howe's book is remarkable for its insistence on the economic basis of peace. Differing from many writers on the Great War, he traces the beginnings of the conflict to the industrial rather than exclusively to the Junker class. Does the world want a durable peace? Then we must find a way to end the struggle for exclusive territories and the economic exploitation and conquests of weak peoples. International control of the Mediterranean, Balkan states, Turkey and Asia Minor will help to attain such a result.

A Peace Congress of Intrigue. Compiled by Frederick Freksa. Translated, with an Introduction and Notes by Harry Hansen. The Century Company. 448 pp. $2.50.

It is frequently said that the origin of the Great War of 1914-18 dates back to the Congress of Vienna in 1815, for it was there that the Prussian autocracy made certain its domination of Germany, which one hundred years later was to disrupt the peace of the world. Any account of the Congress of Vienna becomes, from the standpoint of international justice, a vivid exposition of how not to do it. The present volume describes in detail the two forms of intrigue—social and political—by which the Congress of Vienna was manipulated from start to finish. Moreover, these details are no idle inventions of a later date. They are all related by the participants themselves in contemporary journals and correspondence.

The Chaos in Europe. By Frederick Moore. G. P. Putnam's Sons. 192 pp. $1.50.

President Eliot commends this book to American readers who wish to understand the political and commercial situation in Russia, the Balkan states, and the Near and Far East. Mr. Moore, as a newspaper correspondent, has made repeated visits to Russia and Siberia, has lived for several years in China as an agent of the Associated Press, and has spent much time in the Balkan countries and Turkey, both before and during the war. Mr. Moore is an advocate of the League of Nations.

From Isolation to Leadership. By John Holladay Latané. Doubleday, Page & Company. 215 pp. $1.

Professor Latané, of the Johns Hopkins University, gives in this little book an admirable résumé of American foreign policy from Washington to Wilson. Nothing could be more valuable in these days to the serious student of American history than the clear distinction which Dr. Latané draws between two intimately related phases of American diplomacy, the Monroe Doctrine and the policy of isolation. It is also highly important that Americans should have a definite knowledge of the actual achievements already reached in the field of international cooperation without the sanction of force. These are well stated by Professor Latané. His concluding chapter is an excellent summary of the war aims of the United States.

China and the World War. By W. Reginald Wheeler. The Macmillan Company. 263 pp. Ill. $1.75.

More than one of the problems in statecraft which are about to challenge the attention of the world will center in China. The author of this book, who for the past three years has been a member of the faculty of Hangchow College, seeks to put before the American reader some of the questions that are now facing the new republic, and especially to show how these relate themselves to the issues of the Great War.

WAR EXPERIENCES

"With the Help of God and a Few Marines." By Brigadier-General A. W. Catlin. Doubleday, Page & Co. 425 pp. Ill. $1.50.

General Catlin, who commanded the Sixth Regiment of U. S. Marines at Château-Thierry, is not only qualified in every way to tell the story of the brilliant exploit that caused the French to rename Belleau Wood as *La Bois de la Brigade de Marine;* he is also, as it happens, an officer whose service with the Marines antedates even the Spanish War and who had a great deal to do with training the new men for the work that won the admiration of the Allies in France last year. In this volume he gives a condensed history of the Corps.

The British Navy in Battle. By Arthur H. Pollen. Doubleday, Page & Company. 358 pp. Ill. $2.50.

Mr. Pollen holds a very high place in England as a naval writer. The admiralty itself has such confidence in him that its records were placed at his disposal for the writing of this book, which is the first serious attempt to tell the story of Britain's naval activities in the great war. Besides giving much-desired information, the author makes clear to the lay reader many technical naval matters of great interest.

Naval Power in the War. By C. C. Gill. George H. Doran Company. 302 pp. Ill. $1.50.

Commander Gill, in this revised and enlarged edition of "Naval Power in the War," brings the story of naval operations down to the signing of the armistice. Read in connection with Mr. Pollen's account of the British navy's exploits, this book is especially useful for its graphic story of the part played by the United States in the sea-fighting.

Hunting the German Shark. By Herman Whitaker. The Century Company. 310 pp. Ill. $1.50.

What the American Navy did in the underseas war, as related by a man who cruised for many months with our battleship fleet and himself took a voyage in a submarine. All the different methods and instrumentalities used against the German menace are described in detail.

Campaigning in the Balkans. By Lieutenant Harold Lake. Robert M. McBride Company. 229 pp. $1.50.

A British officer's account of the Salonica expedition, with a brief survey of the part played by the Balkans in the Great War and in the events that led to the war.

Rumania, Yesterday and To-day. By Mrs. Will Gordon. John Lane Company. 270 pp. Ill. $3.

In this volume Mrs. Gordon's account of Rumanian history, life, customs and literature is supplemented by an introduction and two chapters by Her Majesty Queen Marie, who gives a pathetic account of the sufferings that her country has undergone.

A Poet of the Air. Edited by Sarah Greene Wise. Houghton, Mifflin. 246 pp. $1.50.

In the phrase, "A Poet of the Air," Lieut. Jack Wright's mother, Mrs. Wise, has found perhaps the only title that would convey the living lyricism that breathes from the eloquent letters of this eighteen-year-old First Lieutenant Pilot-Aviator of the American Aviation. These letters have been brought together in the hope that they may give other boys something of his fine courage and spirit, and give to other mothers comfort and hope. Jack Wright was an American boy, born in New York City and educated in French schools. French was his language, which explains his great desire to serve France and his love for her people. He had graduated—although but eighteen—at l'Ecole Alsacienne at Paris and at Andover in America and had entered Harvard. He went over early in 1917 with the Phillips Academy Ambulance Unit, and soon went into training for the air service. He was typical of all that is finest and best of our young American manhood, one for whom we cannot mourn, so great was the gladness of his sacrifice.

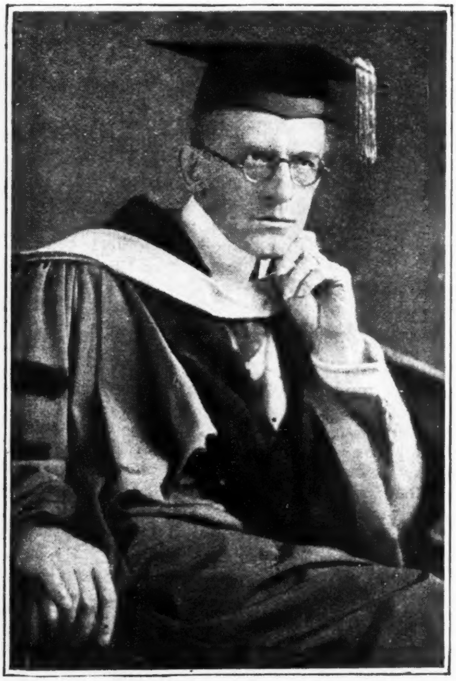
Zigzagging. By Isabel Anderson. Houghton, Mifflin. 269 pp. Ill. $2.50.

It is one thing to have had thrilling contacts with the war and another to be able to relate them in an agreeable manner. Isabel Anderson (Mrs. Larz Anderson) had the opportunity for amazing experiences in her work of running a Red Cross canteen on the Marne for eight months, and she has set down these experiences in graceful, flowing prose that not only vividly pictures war work at the front, but suggests the possibilities of woman's activity in the future in the field of organization. The book is lavishly illustrated and contains in an appendix several pages of general information for Canteen Workers of W. W. R. C. of A. R. C. in France.

Hospital Heroes. By Elizabeth Walker Black. Scribners. 222 pp. $1.35.

In "Hospital Heroes," Miss Elizabeth Walker Black gives a vivid picture of her experiences in a front-line hospital on the Aisne for ten months before and during the great German drive one year ago. For her ability to "stick it," as she writes, she thanks the letters written to her by her mother and a Civil War Uncle, who believed that girls as well as boys should stand by the colors. Hospital life at the front from a nurse's point of view is well pictured in the narrative. Different treatments for wounds are explained, and the daily life of the wounded set down with rare skill. One interesting paragraph contains a comparison between the wounded of different nationalities. Miss Black writes: "English and American wounded are restless and their spirits require activity, but the Frenchman can lie in bed month after month discussing politics, reading, and writing letters. His stoicism under great pain is incredible."

ESSAYS ON RECONSTRUCTION AND LITERARY CRITICISM



DR. RALPH ADAMS CRAM

WITHIN the past three years we have had four books of profound scholarship from the pen of Dr. Ralph Adams Cram. They are all of deep significance to the builders of the new civilization who are now beginning their task. Whether we agree wholly, or in part, with Mr. Cram's conclusions, we cannot mistake his purpose, which is to awaken the American people to the serious work of reconstruction that lies before them. Of the first book, "The Substance of Gothic," Professor Richard Burton wrote: "For that combination of authoritative knowledge and accomplishment, with such power of statement as shall carry the message to large numbers, I should be inclined to give first place to Mr. Cram's 'The Substance of Gothic.' . . . It is a most eloquent book." Former Senator Albert J. Beveridge said of the second volume, "The Nemesis of Mediocrity": "I wish it might be in the hands of every man and woman, old and young, in the United States." (Both these books have been commented upon previously in the REVIEW OF REVIEWS.) The first of the two more recent books, "The Great Thousand Years,"[1] contains two essays. The title essay, written in 1908, and published in England in 1910, is a prophecy of the catastrophic breakdown of civilization, a breakdown foreseen by Dr. Cram when it was generally least foreseen. He prophesied what has since happened by means of his interesting theory of the rhythm of history, a postulate, that so far back as we can measure, civilization's tides ebb and flow in periods of five hundred years. The second paper, "Ten Years After," discusses certain changes, moral and spiritual, that must be effected if we are to escape—in the author's opinion—a second era of Dark Ages. He writes that the world must be remade upon the basic idea of "Communal life conceived in the human scale." There must be a larger "unity without the surrender of independence and autonomy." "The Sins of the Fathers,"[2] published in January, 1919, continues the reconstructive thought that runs through the three previous volumes. Following the introduction, there are three papers. The first is on imperialism. He proposes a substitute for this reach toward world-dominion. Following a spiritual revolution in the minds of men, they must "return to the unit of the human scale. . . . small, compact, self-contained and autonomous states conceived in human scale." In the second paper, "The Quantitative Standard," he would substitute for this modern standard the passion for quality, for perfection and beauty. In the third discussion, which he calls "Materialism," he demands the intimate living union of matter and spirit as a fundamental condition necessary to the upbuilding of a civilization that shall safely evade the dangers of both imperialism and Bolshevikism.

In these four books the reader will find a brilliant analysis of modern civilization, and, however much one may differ with certain conclusions, an eloquent appeal for true democracy and the blending of all existing civilizations in the future into one gracious and harmonious whole.

Mainly in the interest of reconstruction Mr. John Galsworthy has brought together a number of brilliant papers which are published under the title, "Another Sheaf."[3] All of the twelve discussions are characteristic of the novelist's intellectual-emotional manner of dealing with practical subjects. A few are bits of vivid impressionism, as "The Road" and "France 1916-17"; others deal with the restoration of the wounded soldier to his pre-war state of health and happiness, and with the fitting in of the returned soldier, with his enlarged point of view, into industry. Two chapters present the land question as it existed in England in 1917 and in 1918, and there is also a spirited contrast of the Englishman and the Russian; speculations as to the future; an essay on Anglo-American drama, and, "Grotesques," which records the official visit of an angel to England in the year 1947. In "American and Briton" Mr. Galsworthy writes of his hopes of the mutual understanding of America and Great Britain. On this understanding he feels the happiness of nations depends more than on any other world cause. He writes that the friendly union of these

[1]The Great Thousand Years. By Ralph Adams Cram. Marshall Jones. 63 pp. $1.

[2]The Sins of the Fathers. By Ralph Adams Cram. Marshall Jones. 114 pp. $1.

[3]Another Sheaf. By John Galsworthy. Scribners. 336 pp. $1.50.

two great nations is the "ballast of the new order," that there is no bottom upon which to build unless we build upon the solidarity of the English-speaking races.

Mr. Wilson Follett's study of the purpose and meaning of fiction, "The Modern Novel,"[1] will convince any skeptic that splendid literary criticism is being written at the present time in this country. The chapters are mellow with finely ripened knowledge, fascinating with a deftly interwoven humor, and alight with spiritual understanding. There are only a few volumes touching on fiction that even approach this admirable outline of the development of the English novel during two centuries, none that come at once to mind which seriously rival it. The attention of all fiction-writers should be called to this helpful study.

"The poets whose profiles I shall attempt to etch," writes T. B. Rudmose-Brown in "French Literary Studies,"[2] "are alike in one thing only. They loved Art with a love as passionate as a lover's for his mistress or a mystic's for his God." In a moment of blazing inspiration, the author of these studies unfolds the inmost soul of the French nation. He has caught—as it were in instant vision—the profiles of certain poets of France, the outlines blending under his hand to a composite portrait of the undying individuality of the French race. Following the introduction, which records his own point of view regarding the art of the poet (one shared with James Elroy Flecker, that it is a matter of individual expression alone), are studies of Maurice Scève and the poetic school of Lyons, the stories of the love and art of the beautiful Pernette du Guillet and Louise Labé, la Belle Cordière; of the immortal Ronsard; of the poets of the Eighteenth Century; of Leconte de Lisle, Paul Verlaine, Stuart Merrill and Francis Viele-Griffin. Many quotations from the verse of the various poets are given in translation.

Professor Otto Heller presents, in "Prophets of Dissent,"[3] critical estimates of Tolstoy, Maeterlinck, Strindberg and Nietzsche. The papers have breadth, clarity, and a most admirable simplicity of style. There is in this group a certain unity, says the author. They are all radicals and reformers; they are all mystics by "original cast of mind," and in them the basic issues of the modern struggle for social transformation are sharply and clearly joined. Also, they all follow the introspective path toward their individual discoveries of the law of life. By the measure of recent world events, he endeavors to find whether Tolstoy's three articles of faith, viz., that true faith gives life, that man must live by labor, that evil must never be resisted, are sound doctrine; whether Nietzschean Superman conceptions have furnished a basis for world imperialism; and if Maeterlinck's stoic idealism will emerge untouched and untarnished from the emotions attendant on experiencing the harrowing circumstances connected with the war. Professor Heller occupies the recently created chair of Modern European Literature in Washington University, St. Louis.

Four books published in the Bobbs-Merrill series of "Authors And How To Know Them"[4] include a fresh estimate of Matthew Arnold by that eminent critic, Professor Stuart P. Sherman, for which all lovers of Arnold's clear sanity and poise will be extremely grateful. In the same series is an eloquent study of Tennyson by Professor Raymond M. Alden,[5] with many quotations and a closing chapter that discusses Tennyson's relation to modern thought, "Tennyson, The Victorians and Ourselves." Also a fascinating volume on Robert Burns,[6] by William Allan Neilson, Professor of English in Harvard University, and an estimate of Nathaniel Hawthorne by George Edward Woodberry.[7] For their particular purposes these volumes are unexcelled; they give all that is required by the student or person of culture in brief compact form, with ample quotation, and they are all—so far as the series has progressed—written by men of authority in the critical and literary world.

[1]The Modern Novel. By Wilson Follett. Knopf. 336 pp. $2.

[2]French Literary Studies. By T. B. Rudmose-Brown. Lane. 829 pp. $1.25.

[3]Prophets of Dissent. By Otto Heller. Knopf. 286 pp. $1.50.

[4]Matthew Arnold: How To Know Him. By Stuart P. Sherman. Bobbs Merrill. 326 pp. $1.50.

[5]Alfred Tennyson: How To Know Him. By Raymond M. Alden. Bobbs Merrill. 276 pp. $1.50.

[6]Robert Burns: How To Know Him. By William Allan Neilson. Bobbs Merrill. 332 pp. $1.50.

[7]Nathaniel Hawthorne: How To Know Him. By Edward Woodberry. Bobbs Merrill. 242 pp. $1.50.

J. M. BARRIE: BRITISH DRAMATISTS: DRAMATIC CRITICISM

It is to be regretted that the American people have not—like the French—cultivated the habit of reading fine plays as well as seeing them presented on the stage. If such were the case, it would not have been necessary to turn the war plays of J. M. Barrie into a form of short story to insure their welcome. Four plays are published in a clipped, half play, half short-story, form under the title of "Echoes of the War."[8] They are the well-known plays: "The Old Lady Shows Her Medals," "The New Word," "Barbara's Wedding," and "A Well-Remembered Voice." Even as they are, to read them is to enjoy a Barrie play all over again. Structurally, they follow the usual Barrie formula, viz: Take a basic fact of human experience; work out sentimental values and dramatize it as Fancy dramatizes the fulfillment of our wishes in day dreams. Give the drama a local habitation and a name, touch it with a breath of immortal youth from

[8]Echoes of the War. By J. M. Barrie. Scribners. 188 pp. $1.50.

WILLIAM GILLETTE AND HELEN HAYES IN THE NEW PLAY, "DEAR BRUTUS"

the land of faery, give the Commonplace bright glittering fragile wings that sweep through the chambers of the mind leaving behind a trail of ethereal star-dust, and you have a Barrie play. A second volume in uniform edition, "Half Hours," contains "Pantaloon," "The Twelve-Pound Look," "Rosalind," and "The Will;" and a third brings together "What Every Woman Knows," "Quality Street," and "The Admirable Crichton."

The newest Barrie play, "Dear Brutus," which has been given a careful production and a particularly fine cast, is now playing at the Empire Theater in New York. It takes its name from Cassius's speech in the second scene of the first act of "Julius Caesar:"

"Men at some time are masters of their fates:
The fault, dear Brutus, is not in our stars,
But in ourselves, that we are underlings."

The play begins with speculations concerning a mysterious "wood" which appears every Midsummer Eve in a certain part of England. Everyone who goes into this wood has a "second chance" at life and love and ambition. The possibilities of this theme, under Barrie's whimsical treatment, are apparent to every one who knows his method and previous plays. This play will be published later.

With the possible exception of John Masefield's last collection of verse, which includes that memorable poem "August, 1914," one gains a much more satisfying conception of Masefield, the man, and of his life experiences from reading his plays than from his poems. Nine plays are now published in a single volume.[1] They include, among other plays, "The Sweeps of Ninety-eight." "The Tragedy of Pompey the Great," and those dramas that are particularly of England and phases of English life—"The Camden Wonder," "Mrs. Harrison," and his greatest play, "The Tragedy of Nan." In this work one feels the breadth of Masefield's genius, the power that later made itself felt in "Gallipoli," and "The Old Front Line," the poetic fervor that gave us, "Dauber," "The Everlasting Mercy," and "The Widow in Bye Street." Mr. Montrose Moses writes that there is in Masefield a "touch of Shropshire, of Devonshire, of Hertfordshire," and it follows that whenever he is closest to the soil of this England—so particularly his own—he is at his best.

The second volume of Arthur Wing Pinero's "Social Plays"[2] contains "The Gay Lord Quex," (recently revived in New York with a notable cast), The character of "Iris," may be compared as the way of least resistance in life, which is adjudged the playwright's masterpiece. While "The Gay Lord Quex" is interesting as a technical achievement in play-making, which no student of dramatic art can ignore, it has small literary value. "Iris" presents the gradual disintegration of a woman of cultured tastes and luxurious habits, who has not sufficient intellectual fibre to face and conquer poverty. She is a slave to her esthetic sensibilities—not evil, rather the contrary. Mr. Hamilton sums up her character thus: "She is never vulgar; she ends in the gutter, but remains to the end the kind of woman one would like to dine with." The prefaces to the plays are to a high degree informative and exceedingly well written.

A unique volume of dramatic criticism, "European Theories of the Drama,"[3] places enthusiastic readers of the literature of plays and play-making still more deeply in the debt of Mr. Barrett Clark, to whose industry we owe many translations and much of our knowledge of Continental drama. It is—among the critical offerings—the most important dramatic publication of the year—one that cannot fail to prove fascinating as well as extremely useful, inasmuch as it is an anthology of theory and criticism of the drama from the time of Aristotle to the present day. To a series of selected texts Mr. Clark has added painstaking and invaluable commentary, bibliography and biography. The whole graphically pictures the stream of the drama through the civilizations of the world from the high mark of Greek culture onward, and offers much that is valuable to the poet concerning dramatic poetry. Mr. Clark subscribes to general opinion in conceding that there is little criticism to be found in this country. Admitting that Irving, Poe, Lowell, and many others more recently with us, wrote much that was excellent, he does not find that their comment shaped the native drama, or had effect thereon.

[1]Collected Plays of John Masefield. Macmillan, 640 pp. $2.75.

[2]The Social Plays of Arthur Wing Pinero. Edited by Clayton Hamilton. Dutton. 423 pp. $2.

[3]European Theories of the Drama. By Barrett Clark. Stewart, Kidd. 503 pp. $3.

POETRY OF THE HOUR

JOHN MASEFIELD states in the preface to his collected poems[1] that the first months of the war marked the end of his verse-writing. "Perhaps," he says, "when the war is over and the mess of war is cleaned up and the world is at some sort of peace, there may be leisure and feeling for verse-making." And it is his hope that when that time comes he may see more and be able to tell more, and know in fuller measure what the poets of his race have known of the world of beauty, and the people existing forever over England, the images of what England and the English may become, or spiritually are. He says: "Chaucer and Shakespeare, some lines of Gray, of Keats, of Wordsworth, and of William Morris, the depth, force and tenderness of the English mind, are inspiration enough, and school enough and star enough to urge and guide in any night of the soul, however wayless from our blindness or black from our passions and our follies." This new volume contains "Salt-Water Ballads," "Miscellaneous Poems," "The Everlasting Mercy," "The Widow in Bye Street," "Dauber," "The Daffodil Fields," "Sonnets and Other Poems" (including "August, 1914"), "Lollingdon Downs and Other Poems," and "Rosas."

The war has had quite the opposite effect upon one of the younger English poets, Siegfried Sassoon. If one were venturing to name three English poets who saw the war as soldiers, and whose work will be judged in the future as incomparably the most vivid poetry that has come out of the ruck of war, one would name Gilbert Frankau, Robert Nichols, and Siegfried Sassoon. The introduction to "Counter Attack,"[2] Mr. Sassoon's second book, is by Mr. Nichols. He says of the poet's personal appearance: "He is tall, big-boned, loosely built. He is clean-shaven, pale, or with a flush; has a heavy jaw, wide mouth with the upper lip slightly protruding and the curve of it very pronounced, like that of a shriveled leaf. His nose is aquiline, the nostrils being wide and heavily arched. This characteristic and the fullness, depth and heat of his dark eyes give him the air of a sullen falcon." Before the war Sassoon loved hunting; it was a passion with him, and he wrote of the chase, of English sport and the beauty of the English fields. His early books were privately printed. In 1917, a collection of poems, "The Old Huntsman," won deep appreciation, particularly from the soldiers in France. In "Counter-Attack," the English sportsman has disappeared; there emerges the indignant choking expression of one who feels himself and the world outraged by the crime of war. He has seen the war as Barbusse saw it. "Counter-Attack" was frankly written to help end war forever, but like many another man who hated war, Sassoon went on fighting in France and in Palestine. These poems should be read by everyone interested in peace. They are grim-visaged, merciless in their indictment, bitterness in quintessence, horror recoiling upon itself, yet never quite losing beauty from the images and tumbling words, or human compassion and love from the arraignment of the sinful.

SIEGFRIED SASSOON

A quotation from the Book of Job is used as the preface of the "Hymn Of Free Peoples Triumphant,"[3] by Hermann Hagedorn. The poem is one of praise and thanksgiving for deliverance from the "mad-eyed" terror of war, a work of inspiration that cries with Job: "I would seek unto God, and unto God would I commit my cause." There is in it the beauty of great art and the fervor of sorrow that is in the process of becoming joy:

"Under the beak of black hours ravenous,
God of free peoples, Thou hast been true to us,
Friend of the free, when man's weak barriers fall.
Thou art a wall, great Lord, Thou art a wall.

* * * * * * * * * * * * * * * *

"Conqueror, we come,
Devouring fire, invincible light,
Builder of dawn on the ruins of night,
Builder with music of the crystal halls of day,
God, we are Thine, command and we obey."

In the enlarged edition of her anthology, "Christ in the Poetry of To-day,"[4] Mrs. Martha Foote Crow presents a new biography of Jesus, each chapter of which is a poem written by a different author, the whole forming a lyrical expression of the reaction of our minds at the present time to the ideals exemplified in the Man Jesus. Mrs. Crow states that before 1910 she could find very few poems about Jesus, but that since that time they have been written in ever-increasing numbers, as if heralding a belief expressed in one of the Rev. Josiah Strong's treatises, that "the return of Christ is now taking place." A section, "Christ and the World War," has been added to the original volume, and a fine frontispiece, reproduced from the painting by Munkaczy of "Christ Before Pilate." The new poems are from well-known poets. There is a lyric on the selflessness of Christ by Mrs. Crow; others by the late Joyce Kilmer, by Hermann Hagedorn, Daniel Henderson, Amelia Josephine Burr, and Isabel Fiske Conant. Aside from its value as poetry, this volume will be sincerely appreciated for its "lifting up" of the Christ idea. It is a sign of the world's newly found religious mood, a prophecy that righteousness will be the foundation of the new world now in the making.

[1] Collected Poems of John Masefield. Macmillan. 521 pp., $2.75.

[2] "Counter-Attack." By Siegfried Sassoon. Introduction by Robert Nichols. Dutton. 64 pp. $1.25.

[3] Hymn of Free Peoples Triumphant. By Hermann Hagedorn. Macmillan. 49 pp. 75 cents.

[4] Christ in the Poetry of To-day. By Martha Foote Crow. Woman's Press (New York). 227 pp. $2.

FINANCIAL NEWS

I.—BUSINESS AND ECONOMIC SITUATIONS THAT ARE CAUSING MOST CONCERN

THE inanimation that has characterized the financial markets for some time is symptomatic of the uncertain, one might say almost apprehensive, frame of mind of the business leaders of the country. The problems created by the cessation of hostilities have at no time been so thoroughly appreciated from the standpoint of their complexity as at present. It is not the magnitude of these problems that makes for hesitancy (the war has demonstrated our ability to undertake Herculean tasks successfully), but rather the delicate ramifications that lead us onto uncharted seas.

It is by far easier to create a pyramid of inflation than it is to level it without at the same time disturbing some of the foundations. This describes the present situation; yet while it is delicate in the extreme, circumstances are so shaping themselves that there is justification for the conviction that a rift is appearing in the clouds.

Before the nation can be restored to normal peace-time prosperity there are three fundamentals (eliminating from this discussion the vital factor of the settlements made at the peace conference) that must be satisfactorily adjusted. These are, in the order of their importance, the readjustment of labor and commodities; the banking and mechanical facilities for conducting our overseas commerce; and finally the railroad transportation problem at home.

Labor and commodities occupy the first rank because of the extraordinary degree to which they have been inflated. For example, in the cost of a ton of steel from the ore in the mine to the finished product, the labor item probably represents 75 per cent. Since the early months of 1916 the wage cost per ton of steel at the mills for the integrated and low-cost producers has increased from $17 to about $28. This, however, has not kept pace in full with wage increases because of improved methods of production and the fact of capacity output, which in itself has had a tendency to reduce costs. In the same period wages at the steel mills have increased from 140 to 175 per cent. Where great skill is required the increases have been much greater. Common labor has increased from 22 to about 42 cents an hour, or nearly 100 per cent.

As a consequence of this the producer of steel cannot revise his price schedule materially downward until he has the assurance that the manufacturing cost will not be prohibitive, taking into account also large supplies on hand that were produced at the peak costs of the war period. And likewise the consumer of steel, whether interested in the construction of renting properties, factories, or ships, must govern his calculations by considerations altogether different from those that have obtained in the past three or four years of stimulated business and stimulated profits. He must compare the cost of his investment with the probable return on it under conditions that are more representative of normal. In other words, the world is no longer feeding an insatiable war machine; and while Europe will have its reconstruction requirements, some of them imperative, we are nevertheless entering an era where costs will take precedence over promptness in deliveries.

Labor Makes Production Costly

The principal obstacle to rapidly lowered costs is labor, which is confronted on the one side with a smaller amount of work to perform and on the other with an inordinately high scale of living costs. This explains, incidentally, why the steel mills are operating at 60 to 70 per cent of capacity and the copper mines and smelters at from 40 to 50 per cent. From the standpoint of the corporation manager only two alternatives present themselves, viz., voluntarily lower labor costs or curtailed production until a surplus of labor has been created of sufficient size to bring about the correction automatically.

And here is where the situation becomes so difficult. Until living costs are reduced, social tranquillity demands that the wage

scale remain commensurately high. The former is to an extent artificially retarded by the Government's guarantee of prices and its endeavor to stimulate production of certain foodstuffs to meet the great vacuum that exists the world over. But a genuinely favorable symptom is that while the reaction has been slow there is already a perceptible lowering of living costs. The same tendency is finding reflection also in some of the other commodities and basic materials. The probabilities are that a point of resistance will be reached in both materials and labor about mid-way between the high and low points of the war period. The sooner this materializes, the sooner will new life be injected into the industries.

Perils in Price Fluctuations

Reductions in commodity prices do not confine their effects to the labor market. While it is recognized that the greatest possible stimulant of domestic business would be in the form of lower material prices, the other factor to be encountered is that of the tremendous expansion of inventories in the past few years—although the situation is somewhat ameliorated by the fact that the Government will provide for most manufacturers whose output entered directly into the war program. A majority of the large corporations have been sufficiently far-sighted to carry their inventories at pre-war levels. Many others have not. And then there are thousands of small concerns spread out all over the United States to which a collapse in values might mean not only the elimination of all war profits, but bankruptcy as well.

A fairly accurate picture of conditions generally may be obtained in the fact that since the outbreak of the war the inventory account of seventy-five representative industrial corporations is shown by compilation to have increased $700,000,000, or 85 per cent, whereas the working capital of the same concerns has increased $850,000,000, or 70 per cent. The ratio of inventories to working capital stands at about 70 per cent, whereas in the early stages of the war it was close to 60 per cent. Expressed in another way, the major portion of the undisturbed profits of the war period are not represented by cash, government obligations, or bills receivable—but by the highly fluctuating item of inventories.

Demoralization of Foreign Markets

Many of the illusions entertained at the time the armistice was signed have been shattered. One of these pertains to the magnitude of our foreign commerce in the articles of peace. On this score the following figures are valuable, particularly in view of our greatly increased manufacturing capacity, the expansion in the output of finished rolled steel, for instance, having been from 23,000,000 to 39,000,000 tons annually in the last five years:

	Exports	Imports
1918 (June 30 fiscal year)	$5,928,000,000	$2,946,000,000
1917 " " " "	6,293,000,000	2,659,000,000
1916 " " " "	4,333,000,000	2,197,000,000
1915 " " " "	2,768,000,000	1,674,000,000
Average	$4,830,500,000	$2,369,000,000
1914 " " " "	2,364,000,000	1,893,000,000
1913 " " " "	2,465,000,000	1,813,000,000
1912 " " " "	2,204,000,000	1,563,000,000
1911 " " " "	2,049,000,000	1,527,000,000
Average	$2,270,500,000	$1,721,500,000

Compared with 1914, the 1918 fiscal year exports increased 155 per cent. This gain represents mainly the purchases of our Allies of materials the need for which decreased in large part with the defeat of the Central Empires, and does not include overseas shipments for the use of our own naval and military establishments. Europe bought because of insurmountable necessity and with almost complete disregard of all economic and financial laws. The result is that today she is impoverished and her purchasing power for the next few years will depend largely upon the degree of assistance we render through the extension of credits.

But that does not entirely solve the problem. The foreign exchanges have become so utterly deranged as almost to defy the best banking judgment. Thus far no satisfactory solution has been offered, though it is to be hoped and expected that the peace conference will evolve a plan that will enable this intricate machine again to function properly. One of the best suggestions yet made is for an international bond issue or similar obligation that could be used as a basis of credit between the nations. This, however, could be only a temporary expedient.

While gold is the international medium

of exchange, balances between nations are, in the final analysis, discouraged by the flow of commodities and manufactures. Therefore one of two things must happen—either we must advance Europe the means with which to continue her purchases here, or she will be forced to liquidate as rapidly as possible her debt to us through the single medium now available, namely, the sale to us of the necessities and luxuries which by reason of the tariff and lower costs she can place here cheaper than we can produce them. The most likely course is that the next year or two will witness large emissions here of foreign securities that will compete for a rather limited supply of capital, made so by reason of the next government loan, the unpaid balances on previous loans that are still being carried by the banks or the Federal Reserve institutions, and high income-taxes.

Improvement in the Railroad Outlook

All of which leads us to the very foundation of national economic and financial vigor. This is the railroad structure. The carriers are the largest single peace-time customers of the mills and factories, and their purchases necessarily cannot be large if they are completely divested of their credit. When the Government took over the railroads they had lived off the final ounce of fat accumulated in the days of profitable business. Hence their present distressed condition—a condition that would mean prostration in every direction if they were returned at once to their private owners. But here is where another hopeful sign is to be seen. The Railroad Director is on record to the effect that relinquishment of control should not occur until the rails are adequately prepared for it. What is more, railroad executives who have been called to Washington for consultation are beginning to note beneath the surface an attitude of sympathy that contrasts most strikingly with that of the past. There seems to be a sincere effort to treat the subject intelligently and constructively. A half-dozen plans are under consideration, from which one should develop that will be satisfactory to all parties.

II.—INVESTORS' QUERIES AND ANSWERS

STOCK QUOTATIONS EXPLAINED

I am enclosing several clippings from United States and foreign newspapers showing the usual tables of security quotations and would thank you to explain briefly the meaning of the various headings of these clippings.

In the clipping headed "New York Stock Sales," the columns headed "High," "Low" and "Close" record the highest, lowest and closing prices at which actual transactions were made on the New York Stock Exchange for the day in question. The column headed "Net Change" records the differences between the closing prices of the day in question and the closing prices of the previous day. We might add that the actual trading period on the New York Stock Exchange is between the hours of ten o'clock A. M. and three o'clock P. M., except on Saturday, when it is between the hours of ten o'clock A. M. and twelve o'clock noon. Prices on the New York Stock Exchange, moreover, represent dollars per share. To know their full significance, therefore, it is necessary for one to know the par values of the stocks that are quoted. Some issues are made without any par value at all. In the cases of others, par values range all the way from $1 per share to $100 a share. Take, for example, some of the issues listed in the enclosed clipping to which we are referring: Alaska Gold Mining and Alaska Juneau stocks quoted, respectively, at 1¾ and 1⅞, have a par value of $10 per share; American Zinc & Lead, quoted at 13⅛, has a par value of $25 per share; Cerro De Pasco Copper, quoted at 31½, has no par value. Most of the other stocks have a par value of $100 per share.

Quotations in the other two clippings from American newspapers also represent dollars per share. In clipping headed "Local Bid and Asked," the quotations are what are called "Nominal Quotations," which means that they do not represent prices at which actual transactions were made. The column headed "Bid" records the prices which buyers are prepared to pay, and the column headed "Ask" records the prices which sellers are willing to take. These quotations as you will note, are of the same character as those indicated in pounds, shillings and pence in the records of the Brisbane market, shown on still another one of your clippings.

In the market for stocks where the bid and asked prices are recorded, it is not always necessary for buyers to pay all that the sellers ask. Bargaining enters into these transactions, and depending upon the strength of the supply or the demand for the stocks, transactions are made accordingly. For example, take a stock like Buffalo & Susquehanna preferred, quoted in the clippings at 59 bid, 61 asked: It is altogether probable that a buyer under normal conditions would find it possible to bargain with the seller for the stock at an average price of 60. If there was a considerable amount of the stock for sale it might even happen that the buyer would be able to get what he wanted by bidding just a little over 59. That in a rough way is how the market operates. It is possible nowadays for one to buy even a single share of standard stocks, although the unit of transactions on the New York Stock Exchange, where the basic prices are established, is a hundred shares.